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Investigation of legal criteria governing notice requirements and oral change order disputes

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INVESTIGATION OF LEGAL CRITERIA GOVERNING NOTICE REQUIREMENTS AND ORAL CHANGE ORDER DISPUTES

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INVESTIGATION OF LEGAL CRITERIA GOVERNING NOTICE REQUIREMENTS AND ORAL CHANGE ORDER DISPUTES

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ABSTRACT

The focus of this thesis is the investigation of legal criteria governing resolution of construction contract disputes involving notice requirements and oral change orders. The current construction contract law literature directed at the construction contract administrator is reviewed and synopsized. The purpose of the applicable contract requirements and relevant issues are discussed. Rules of application distilled from case law are presented with reference citations. The rules are verified by further case law review. The proper use of this information is discussed.

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CHAPTER 1

INTRODUCTION

Background

The attitude of the judicial system towards contract formation provides the basis for understanding how construction contracts are interpreted when a dispute arises. As stated by Sweet,

> Generally, American law gives autonomy to contracting parties to choose the substantive content of their contracts. Since most contracts are economic exchanges, giving parties autonomy allows each to value the other's performance. To a large degree autonomy assumes and supports a market place where participants are free to pick the parties with whom they deal and the terms upon which they will deal.[1]

The importance of this judicial attitude is that courts will seek to enforce the provisions of the construction contract.

In almost every construction contract, there are procedural requirements regarding how and when knowledge is communicated about situations that may affect project costs and schedule. For instance, there are provisions requiring the contractor to notify the owner in writing should the contractor encounter unanticipated events or circumstances that may lead to an increase in cost to the owner or that may delay the timely completion of the project. Further, it is required that all change orders be in writing. At the outset, it should be stated that the courts will enforce these provisions unless it has been found that the requirement has been waived by the owner. However, there

are a number of ways that the requirements can be satisfied aside from a strict adherence to the technical requirements. Therefore, it is important that both the owner and contractor understand these conditions.

Objectives

The objective of this paper is to define the requirements related to two important notification mechanisms in construction contracts. These mechanisms are:

1. The requirement imposed on the contractor to notify the owner that conditions or events have occurred that may affect the owner's project costs or may delay project completion.
2. The requirement that all change orders be in writing.

The paper discusses the conditions under which a waiver occurs and the various ways in which written communications requirements can be satisfied. In both situations, the necessary conditions may have occurred without the awareness of either party. Knowledge of these situations is an essential prerequisite for good contract administration.

There are several reasons for this paper. Certainly there is literature available addressing these topics. However, much of this material is vague and confusing and is

not readily understood by those involved in contract administration. In some instances, the requirements are superficially or simplistically presented often misleading the reader. Sadly, these misunderstandings sometimes promote rather than minimize disputes. There is a belief by many involved in the construction process that courts are arbitrary and that the outcome of a dispute cannot be predicted with reasonable certainty. This paper is written in part to demonstrate that careful case law research shows consistent and predictable application of the law.

Organization of the Paper

This paper is organized in two major parts. The first part addresses notice requirements and the second covers the issue of written change orders. Each section begins by citing the pertinent contract provisions from four standard contract forms. Then, the important issues raised in the literature are discussed. Next, several key court cases are detailed, and from these case studies, specific rules of application are developed. Finally, these rules are tested against the most current appellate court decisions to ascertain their consistency.

CHAPTER 2

NOTICE REQUIREMENTS: PURPOSE AND RELEVANT ISSUES

Purpose of Written Notice

The owner has the right to know his liability for that item for which he has bargained. Contractually, the owner preserves this right by requiring the contractor to notify the owner in writing should situations occur that may increase project costs to the owner or may delay completion. As stated by an Illinois court,

> In a building and construction situation, both the owner and the contractor have interests that must be kept in mind and protected...The owner has a right to full and good faith performance of the contractor's promise, but has no right to expand the nature and extent of the contractor's obligation. On the other hand, the owner has a right to know the nature and extent of his promise, and a right to know the extent of his liabilities before they are incurred. Thus, he has a right to be protected against the contractor voluntarily going ahead with extra work at his expense. He also has a right to control his own liabilities. Therefore, the law required his consent be evidenced before he can be charged for an extra.[1]

Additionally, the court of Appeals of North Carolina stated:

> We are not blind to the possibility that the Contractor in this case encountered considerably changed conditions and extra work. But the position of the Contractor must be balanced against the Commission's compelling need to be notified of "changed conditions" or "extra work" problems and oversee the cost records for the work in question. The notice and record-keeping procedures of these provisions are not oppressive or unreasonable; to the contrary, they are dictated by considerations of accountability and sound fiscal policy. The State should not be obligated to

> pay a claim for additional compensation unless it is given a reasonable opportunity to insure that the claim is based on accurate determinations of work and cost. The notice and record-keeping requirements constitute reasonable protective measures, and the Contractor's failure to adhere to these requirements is necessarily a bar to recovery for additional compensation.[2]

There is consistency among the courts that notice should allow the owner to:

1. Investigate the situation to determine the character and scope of the problem.
2. Develop appropriate strategies to resolve the problem. He may choose to redesign portions of the work and issue the required change order, solicit bids from the contractor or other contractors on various alternatives, or delete portions of the work.
3. Monitor the effort and document the contractor resources used to perform the work.
4. Remove interferences that may be limiting the contractor's ability to perform the work.

Often, especially where there are changed or differing site conditions, the owner cannot correct the problem. For example, if during construction of a building foundation or embankment, unsuitable soil is found, notice allows the owner to investigate the site and perhaps redesign the foundation or adjust the alignment. If no alternative is available, the owner has the opportunity to negotiate a price in advance or, if unsuccessful, document the

contractor's effort and costs so that any additional costs to the owner will not be based solely on the contractor's records. Thus, notice provisions place the owner and contractor at parity with respect to determining facts and resolving issues arising from potential claims.[3]

Another essential element of notice is the assertion by the contractor that the work is beyond the contract scope, and the contractor expects additional compensation or time. Griping or mere discussions are not sufficient notice as it is not the responsibility of the owner to determine why additional expenses or delays are being incurred.

Contractor notice may also alert the owner to other problems. For example, where there is a delay, the owner may not be aware of the impact of certain actions/inactions by the owner or third parties on the contractor's ability to perform the work. Notice provides an early opportunity to correct the situation before it develops into a more serious problem and to alert the owner of possible constructive changes. Many disagreements occur gradually during the course of discussions. Notice must be provided when the contractor believes subsequent decisions have altered the contract requirements. For instance, consider a case before the Veterans Administration Board of Contract Appeals involving a dispute over the installation of fluorescent lighting fixtures at a new hospital facility. Interferences and location problems were encountered, and numerous

discussions were held at the field level to decide on an installation method. The Board stated:

> In the circumstances of the instant case, where the parties were, in effect, jointly trying to find a mutually agreeable method of installing (lighting) fixtures, the need for a clear prompt notice of a claim is evident. Otherwise it is well nigh impossible to determine when the give and take of routine discussion left off and the battle lines were clearly and irrevocably drawn.[4]

When unforeseen events occur, contractors often are not fully aware of the conditions or the impact on their ability to perform the work. A situation that begins as a differing site condition can cause a delay and may later develop into a claim. Therefore, it is recommended that a contractor submit an initial notice that references all of the relevant contract clauses.

Contract Language

The contract language is of paramount importance. The following four standard contract forms are typical of those most likely to be encountered by small- and medium-size contractors involved in commercial and highway construction.

1. American Institute of Architects (AIA), A201, 1976.
2. Federal Acquisition Regulations (FAR), 1985.
3. Engineers Joint Contract Document Committee (EJCDC), 1910-8, 1983.
4. Commonwealth of Pennsylvania, Department of Transportation (PennDOT), Form 408, 1983.

Each of the above contract documents are similar relative to types of situations requiring notice. The main differences are in the time limits and what must be communicated.

The essential elements contained in most notice provisions are:

1. Form of communication
2. To whom to direct notice
3. Time limit for submission
4. Assertion that additional compensation or time is expected
5. Procedure to be followed or reference to the changes clause for guidance

Problems requiring notice come from many sources and require a general clause addressing the notice requirements. The most common situations requiring notice are:

1. Changed or differing site conditions
2. Directives to do extra work
3. Delays
4. Intent to submit a claim

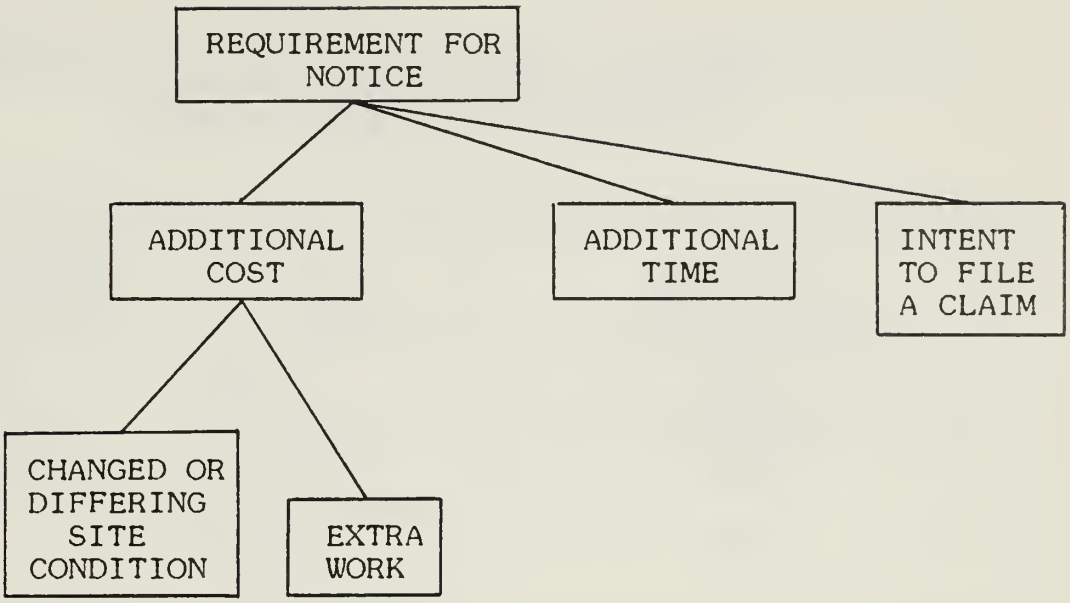
Items 1 through 3 are problems requiring notice while item 4 is further notice to the owner that his initial interpretation is not acceptable to the contractor and a claim for additional compensation and/or time will be submitted.

Identification of these problems and their coordination within the contract documents deserves further discussion.

Figure 1 shows the applicable paragraphs from each of the four standard contract forms. It is important that both parties review the contract in its entirety because the requirements in the various paragraphs may be different.

It is often alleged that contracts drafted by various professional associations and agencies contain terms that are more favorable to the members of the respective organization.[5] However, a review of the specification requirements indicates that relative to notice, there is no apparent favoritism. Tables 1 through 4 summarize the specification requirements of the four standard contracts forms listed above.

Relative to changed or differing site conditions (DSC), Table 1 shows the AIA document requires notice within 20 days. The FAR and EJCDC documents require prompt notice. The AIA, FAR, and EJCDC documents further require that the notice must be made before conditions are disturbed or before proceeding with the work. In each instance, the notice must describe the conditions at variance with the contract documents. The PennDOT document does not have a DSC clause. Often the absence of a Differing Site Conditions clause reflects an owner's policy decision that contingency costs are to be anticipated by the contractor and must be built into the contractor's initial bid. However, the PennDOT specifications require unit



STANDARD CONTRACT REFERENCE				
AIA	12.2.1	12.3.1	8.3.2	7.4.1
FAR	52.236-2	52.243-4	52.212-12	N/A
EJCDC	4.3.2	11.2	12.1	9.11
PENNDOT	N/A	110.03(e)	111.03(e)	105.01

FIGURE 1

Contractual Notice Requirements

TABLE 1

Comparison of American Institute of Architects (AIA)
Standard Specification (c) 1976
Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Changed Conditions A201, Para. 12.2.1	Form To Whom Time Limit Add'l $ Expected Other References	N\A N\A 20 days Yes N\A
Expectation of Compensation for Extra Work A201, Para. 12.3.1	Form To Whom Time Limit Add'l $ Expected Other References	Written Architect 20 days Yes Para. 10.3
Delay A201, Para. 8.3.2	Form To Whom Time Limit Add'l $ Expected Other References	Written Architect 20 days Yes N\A
Intent to File a Claim A201, Para. 7.4.1	Form To Whom Time Limit Add'l $ Expected Other References	Written Other Party Reasonable Time N\A N/A

TABLE 2

Comparison of Federal Acquisition Regulations (FAR)
Standard Specification (1985)
Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Changed Conditions 52.236-2 (1985)	Form To Whom Time Limit Add'l $ Expected Other References	Written Contracting Officer Promptly before disturbance Yes N/A
Expectation of Compensation for Extra Work 52.243-4 (1985)	Form To Whom Time Limit Add'l $ Expected Other References	Written Contracting Officer 20 days Yes N/A
Delay 52.212-12 (1985)	Form To Whom Time Limit Add'l $ Expected Other References	Written Contracting Officer 20 days yes N/A
Intent to File a Claim 52.233-1 (1985)	Form To Whom Time Limit Add'l $ Expected Other References	Written Contracting Officer N\A Yes 41 U.S.C. 601-613

TABLE 3

Comparison of Engineers Joint Contract Document Committee (EJCDC) Standard Specification (1983) Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Changed Conditions Standard Form 1910-8, Para. 4.3.2	Form To Whom Time Limit Add'l $ Expected Other References	Written Owner & Engineer Promptly before disturbance Yes Para(s). 6.20, 6.22 Articles 11, 12
Expectation of Compensation for Extra Work Standard Form 1910-8, Para. 11.2	Form To Whom Time Limit Add'l $ Expected Other References	Written Other party & Engineer 30 days Yes Para. 9.11
Delay Standard Form 1910-8, Para. 12.1	Form To Whom Time Limit Add'l $ Expected Other References	Written Other party & Engineer 30 days Yes Para. 9.11
Intent to File a Claim Standard Form 1910-8, Para. 9.11	Form To Whom Time Limit Add'l $ Expected Other References	Written Other party & Engineer 30 days Yes N\A

TABLE 4

Comparison of Pennsylvania Department of Transportation (PennDOT) Standard Specification (1983) Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Changed Conditions	Form To Whom Time Limit Add'l $ Expected Other References	N/A DSC Clause not included in PennDOT Specifications
Expectation of Compensation for Extra Work Specifications Para. 110.03(e)	Form To Whom Time Limit Add'l $ Expected Other References	Oral / Written Inspector / District Engr. Immediately / 2 days Yes Section 105.01
Delay (As amended Sept. '83) Para. 111.03(e)	Form To Whom Time Limit Add'l $ Expected Other References	Oral / Written Inspector / Engineer(s) 10 days Yes N/A
Intent to File a Claim Specifications Para. 105.01	Form To Whom Time Limit Add'l $ Expected Other References	Written Chief Highway Engineer 10 days Yes 72 P.S. 4651

price/volume bids which allow more flexibility for DSC conditions.

Situations may arise where it is difficult to distinguish a changed condition from a directive to perform extra work. Table 2 highlights several inconsistencies within the contract documents. The FAR and EJCDC documents require prompt notice for changed conditions and 30 days for extra work. When performing work for PennDOT, written notice must be given within two business days. The AIA document avoids any inconsistency because the same clause covers extras and changed conditions.

Likewise, it is often difficult to separate situations that will lead to increased costs from those that may cause a delay. Table 3 shows notice requirements for delays. The AIA provisions for delays, extras, and changed conditions are consistent. The timing requirements for the other documents are not the same. The PennDOT specification differs in one important respect. The section General Conditions Concerning Delay Claims, Section 111.02, specifically identifies proper record keeping as the reason that notice must be provided. By not mentioning all four of the purposes of notice and instead focusing attention on only one, the owner might be limiting his rights regarding notice. If the contractor keeps proper records but does not provide notice, the owner may have difficulty establishing that the contractor has not complied with the notice

requirement. None of the cases researched considered this issue.

Table 4 addresses the question of whether the contractor must notify the owner of his intent to file a claim. The importance of this requirement will become apparent later; however, it is evident that only the EJCDC requires the notice to be this specific.

Important Issues Relative to Notice

Often, contractors are reluctant to give notice of apparent delays or other directives because they do not want to create a project environment of mistrust or antagonism. Frequent notices of delays and disputes may create the impression that the contractor is preparing a major claim.[6] Yet, failure to provide notice will usually result in the contractor forfeiting the right to additional compensation or a time extension. There are numerous writings that discuss notice requirements. The important issues are highlighted below.

Waiver

Waiver is an important issue in deciding if notice requirements will be enforced. According to Anson's Law of Contract, an owner by his own actions can effectively waive

his right to insist that the contractor perform in accordance with the contract requirements.[7] While there have been complaints that waiver cannot be applied unless the owner receives some consideration from the contractor in exchange for giving up this right, Anson states that the courts have upheld this position on the basis of equity and have compared waiver to equitable estoppel. The doctrine of estoppel prevents the owner from insisting upon strict compliance of the contract requirements by the contractor where the owner's actions have clearly been in conflict with the same requirements.

The decision of the U. S. Supreme Court in Plumley v. United States[8] is generally regarded as a landmark case providing for strict interpretation of the notice requirement. However, there is a substantial body of case law where the strict compliance has not been enforced. Logan states that courts have been willing to bend notice requirements where equity mandates such a result and where there has been no prejudice.[9] The case of Hoel-Steffen Construction Company v. United States, 456 F.2d 760, is often cited to indicate that notice requirements are viewed as mere technicalities and the courts seek ways to avoid strict enforcement. The refusal to enforce forfeiture has been based on the doctrines of waiver or estoppel. That is to say, the courts have found that the owner had committed such acts, or the course of conduct between the parties had

been such that, in equity and good conscience, contractual provisions for forfeiture could not be asserted against the Contractor.[10]

Perhaps the most common way an owner can waive notice requirements is to pay the contractor for previous change order work where notice was not given. If previously ignored, the contractor will have been led to believe that the provision will not be enforced, and the notice requirement cannot be reapplied unless the contractor has been notified.

Is the Requirement Waivable?

Where there are statutory requirements for written notice, the requirements cannot be waived. This is seldom the situation, except as it relates to oral change orders on public contracts.

Owner Knowledge

Contractors frequently assert that the owner was aware of the events leading to increased cost or delay, and therefore, the written notice requirements should not be enforced. The extent of knowledge can vary. For instance, in Schnip Building Co. v. United States,[11] the owner representative was present daily, was fully aware that

additional costs were being incurred, and yet the contractor was unable to recover. The court felt that it was not the role of the government to ascertain if the additional costs were caused by alleged differing site conditions or improper construction methods. However, in Weeshoff Construction Co. v. Los Angeles County Flood Control District,[12] the contractor recovered because the awarding agency knew that a site inspector was directing that changes be made. The difference between the cases is the ability of Weeshoff to show that the owner knew that work outside the contract requirements was being accomplished and that the contractor expected additional compensation. If the contractor can show such knowledge by the owner, the formal notice requirement may be waived. This is especially true if the problem is the owner's fault or something within his control.[13]

Some courts have held the owner responsible if it can be shown that the owner should have known of the problem. One court has held that the form of the contractor's statements and objections made at meetings and requests for reconsideration of the government's rejection of submittals was sufficient notice.[14]

Oral and constructive notice are frequently discussed in the literature. For example, in Hoel-Steffen Construction Co. v. United States,[15] the contractor orally complained and stated his intent to file a claim. But, in

another case, the contractor's claim was rejected because notice was characterized as griping rather than formal notice, and no intent to file a claim was ever asserted.[16] Constructive notice can occur in job site correspondence and in other documents. In one case, a document drafted by the government agent clearly indicated the agent's knowledge and was determined to be sufficient notice.[17] Critical path method (CPM) schedule updates have been found adequate to alert the owner of a delay. In Vanderlinde Electric v. City of Rochester, it was determined that monthly updates kept the owner fully and continuously aware of delays.[18] However, nonperiodic or mere submission of updates may not be adequate.[19]

One author has suggested that the type of claim can be a factor in determining if the owner knew. With regard to delays, it is stated that:

> Notice requirements are frequently not enforced against contractors because the owner is already well aware of the delay and suffers no prejudice due to the lack of notice. In the matter of differing site conditions, the opposite is true. The owner can almost always show that it suffered prejudice due to lack of prompt notice; so the requirement is almost always enforced against the contractor.[20]

Owner Prejudice

When the owner is afforded the timely opportunity to resolve the problem, mitigate damages, or document contractor costs, then he has not been prejudiced. Where

the owner has not been prejudiced, courts will usually set aside the formal requirements for written notice. In one decision, the contractor was able to recover despite the lack of notice because the owner had no alternative course of action.[21] In that case, the dispute involved highly technical matters. The supervising architect, who was also the government's technical expert, was aware of the problems, but failed to communicate these to the authorized government representative. The Board felt that the government was not prejudiced because it would have merely referred the matter back to the supervising architect. However, such instances are not common.

Apparent Authority

As a general rule, communication of delays and problems affecting costs must be made to the person having the authority to initiate or issue changes. Communications to others may result in the claim being denied. The law is very difficult to analyze in this area. Caution suggests that a contractor obtain the approval of a corporate officer (in a private case) or an executive officer of a public agency (in a public case).

Timing

Most standard construction contracts require notice within a specified time limit or promptly upon recognition of the changed condition. Sometimes, contracts will require notice within a reasonable time. This nebulous requirement places considerable burden on the courts to determine what is reasonable. Nevertheless, after-the-fact notice will not likely be judged as reasonable. However, courts are more lenient with late notice that is only a few days beyond the specified limit, so long as the owner has not been prejudiced.[22]

Repetition of Events

Once notice is given, no further notice is required when the same conditions recur throughout the job.[23]

Form of Communication

The owner's knowledge that extra work was being performed can be either actual or imputed. Knowledge can be imputed from Critical Path Method (CPM) schedule updates that serve to keep the owner "fully and continuously aware."[24] However, if the updates contain errors, are inaccurate representations of job progress, or fail to

assign responsibility for the problem, they are insufficient notice.[25]

Job site correspondence, letters, memos, and minutes of meetings may constitute notice. Verbal notice may also suffice is some situations. However, in one instance, an extended phone conversation with the Chief Engineer was not considered sufficient for notice.[26] However, the content is generally of greater importance than the form of notice.

Requirements for Additional Detail

Many contract provisions require that the notice be accompanied by or soon followed by submission of detailed information regarding cost, or delay impacts. However, compliance with such provisions is difficult. Courts have often found such requirements too onerous to enforce considering the brief time allowed for submission of the notice.[27] The court felt the requirement for the exact amount of damages was inconsistent with the intent of notice provisions.

CHAPTER 3

NOTICE CRITERIA: LEGAL RULES OF APPLICATION

When a dispute arises, providing proper notice is often considered a secondary issue. This explains the paucity of legal cases dealing primarily with notice. Nevertheless, the contractor must be able to show that the notice provisions have been complied with or waived before he can argue other issues of entitlement. More than 30 appellate court cases dealing primarily with notice requirements were investigated to determine the current state of case law. The investigation revealed substantial consistency among the decisions.

Multiple Requirements--One Situation

The four standard construction contract forms discussed earlier include four distinct situations requiring notice (see Figure 1). These can be reduced to a two-step process, appraisal and quantitative. The first step, appraisal notice, consists of alerting the owner that the contractor: 1) is being directed to perform work beyond the contract requirements, 2) is being delayed by a situation beyond his control, or 3) is encountering conditions at the construction site that are materially different from those

indicated in the contract documents or that were reasonably expected. This element of notice gives the owner an opportunity to investigate the situation. The second step, quantitative notice, affirms the contractor's intention to request additional compensation or a time extension. This second step alerts the owner that the contractor believes the additional expenses are compensable under some provision of the contract or that he is entitled to a time extension. The owner has the opportunity to reconsider his position or to document the additional resources used by the contractor. While this two step process is evident in the contract language, notice of events or delays is frequently accompanied by the notice of intent. Although the elements of notification and intent are both essential to recovery, courts will generally examine notice as a single issue.

Governing Issues

In deciding disputes involving notice, four important questions must be answered. These are:

1. Is the requirement necessary?
2. Was the requirement satisfied?
3. Can and has the requirement been waived?
4. Was the owner prejudiced?

These questions are hierarchical in nature. Depending upon the findings of the court, the contractor may not be barred

from recovery for failing to follow the technical notice requirements of the contract. A flow chart is provided in Figure 2 to illustrate the determination process. Reference cases for the various criteria are shown in Table 5. Each of these issues is discussed below.

Is the Requirement Necessary?

Normally, construction contracts require notice. If not stated in the contract documents, then the issue is irrelevant. However, some courts are willing to set aside the requirements for notice if there has been a breach of contract. Breach occurs when the work is materially different from the contract scope, is a cardinal change, or is a separate agreement outside the contract boundaries. Nat Harrison Associates, Inc. v. Gulf States Utilities Company serves to illustrate this concept.

The contract called for construction of approximately 158 miles of 500 KVA single-circuit, three-phase transmission line in Louisiana. After award, a revision to the contract was negotiated for the construction of an extra tower arm on which an additional line was to be strung. This extra work was applied to a portion of the transmission line. The pertinent facts as stated by the court are as follows:

> Gulf States was to obtain and furnish to Harrison both a cleared right of way in several ten-mile sections and

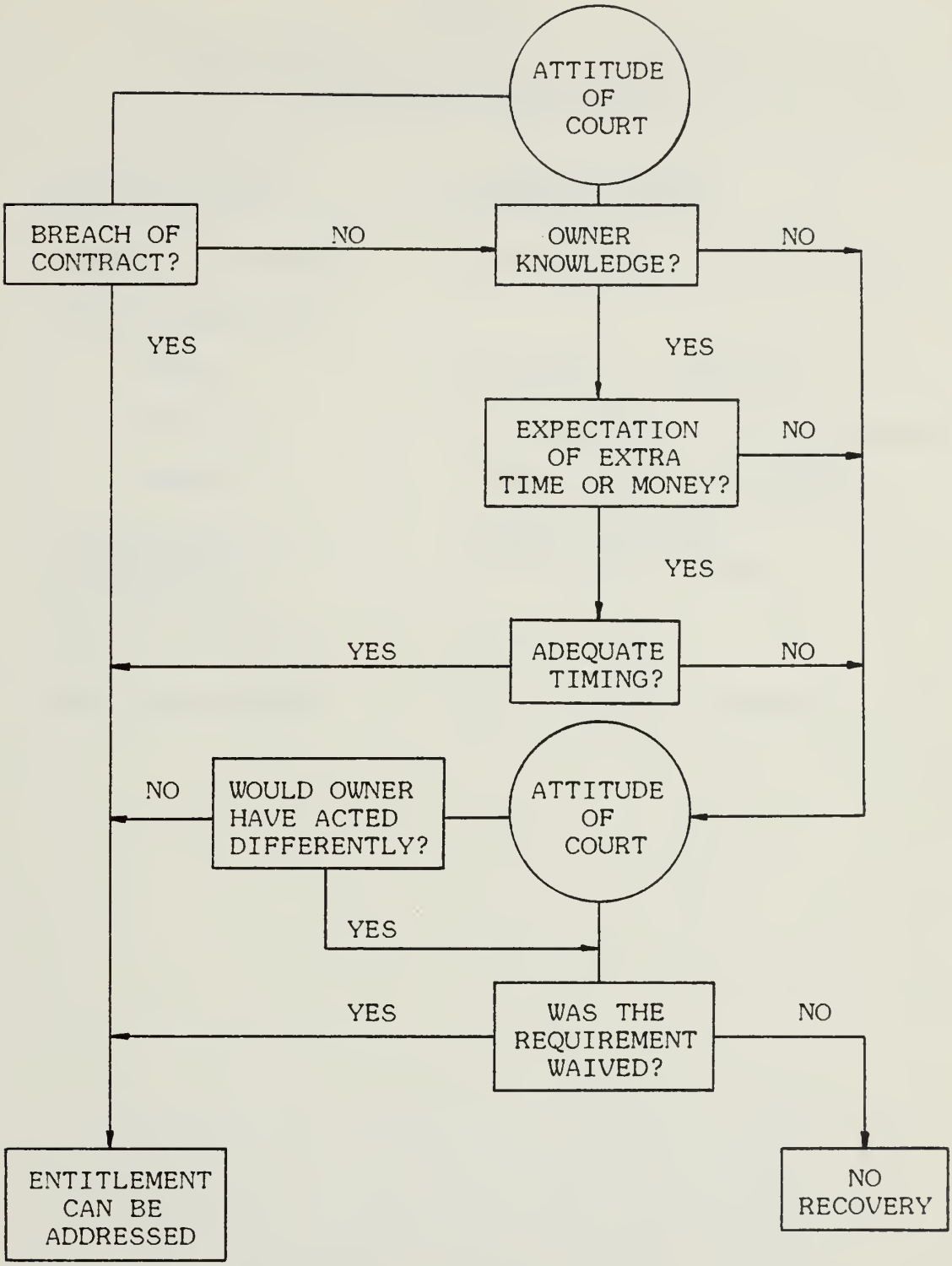


FIGURE 2

Legal Rules of Application Flowchart: Notice

TABLE 5

Legal Rules of Application Flowchart:
Notice Reference Cases

LEGAL CRITERIA	REFERENCE CASE
BREACH OF CONTRACT	NAT HARRISON v. GULF STATES
OWNER KNOWLEDGE:	
ACTUAL	NEW ULM v. STUDTMANN
IMPLIED	HOEL-STEFFEN v. UNITED STATES
IMPUTED	POWERS REGULATOR COMPANY
EXPECTATION OF ADDITIONAL COMPENSATION	SCHNIP BUILDING v. UNITED STATES
OWNER PREJUDICE	SANTE FE, INC.
PROVISION WAIVED	E. C. ERNST v. KOPPERS

> all of the basic materials necessary for the above ground construction. The contract allowed extensions of time for delays attributable to the "elements (weather), war, riot, strikes and other unavoidable casualties" and for an "equitable extension of time" in the event Gulf States failed to meet the delivery schedule for materials and right of way. "No additional compensation of any nature," however, was to be paid as a result of Gulf States' delays in furnishing right of way and materials.[1]

Gulf States was late in providing both right of way and materials and did not extend the contract completion time as provided for in the contract. In addition, Gulf States either ignored or refused time extensions requested by Harrison resulting from delays due to inclement weather, strikes and other conditions. Counts II and III of Harrison's court action respectively sought damages resulting from acceleration of the contract and claimed damages for breach of Gulf States' duties under the contract to furnish the right of way and materials so that Harrison could perform its work timely and in sequence. One important issue centered on whether the costs allegedly incurred by Harrison were "extra costs" within the meaning of the notice provision. The court stated:

> There is a point, however, at which changes in the contract are to be considered beyond the scope of the contract and inconsistent with the "changes" section. Damages can be recovered without fulfillment of the written notice requirement where the changes are outside the scope of the contract and amount to a breach. Since the evidence supports the jury's finding that there was a breach of contract, we are unable to hold, as a matter of law, that Harrison was required to give prior notice of the additional costs it claims here or that it is not entitled to damages for fundamental alteration of the contract.[2]

Thus, the Louisiana court refused to enforce the notice requirement where there was a contract breach. Importantly, the court decision dealt very little with other relevant issues such as waiver, owner knowledge, and prejudice. The implication of the Harrison decision is that the question of breach is supreme in the decision hierarchy, and that where a breach occurs, the remaining questions need not be addressed.

It is worth noting that the judicial attitude towards breach and notice is not unanimous. For instance, in the case of Buchman Plumbing Company, Inc. v. Regents of The University of Minnesota, the court refused to set aside the requirement even though a breach occurred. The court stated that, "compliance with provision in construction contract requiring written notice...for damage by way of extra cost was condition precedent to contractor's maintenance of action for breach of contract."[3]

Was the Requirement Satisfied?

Written notice implies a formal letter to the owner or his authorized agent or representative clearly stating the problem, applicable contract provisions, and that the contractor expects to be compensated and/or have the contract time extended. If done in a timely manner, then the requirements have been satisfied. However, notice can

be communicated in ways other than a formal letter. This is usually referred to as constructive notice. Courts will set aside the formalities if it determines that the intent of the notice has been satisfied. The important issues in making this determination are:

1. Owner knowledge of the events and circumstances.
2. Owner knowledge that the contractor expects compensation or a time extension under some provision of the contract.
3. Form of communication.
4. Timing of communication.

If it is found that the intent of the notice provision was not satisfied, some courts may address the question of whether the lack of notice actually prejudiced the owner.

Owner Knowledge

Owner knowledge can be in two forms: 1) actual knowledge, and 2) constructive knowledge. Constructive knowledge can be further subdivided into: a) implied, and b) imputed knowledge. Each of these types of knowledge are defined and illustrated with an actual case.

Actual Knowledge. Actual knowledge means knowledge that is clear, definite, and unmistakable. The facts of a situation have been conveyed orally or in writing so that

there is no doubt that the party who requires the knowledge is aware. New Ulm Building Center, Inc. v. Studtmann, 225 N.W.2d 4, demonstrates the essential elements of actual knowledge. The case involves a couple who negotiated for the construction of a house. The builder refused to sign a written contract for a lump sum, but the parties orally agreed to proceed with construction based on an estimated price. According to the court record,

> The Studtmanns took the plans and material list to New Ulm Building Center, Inc., who agreed in writing to furnish all of the material for the sum of $11,385, plus 3-percent sales tax. That agreement contained the following postscript: "If job runs less Owner will receive credit, but not any extra unless owner is notified." It is undisputed that as the work progressed, there were extensive changes and "extras" and that although the Building Center furnished the Studtmanns with monthly statements of the cost of materials, no specific notice was given to them that these (costs) included extras.[4]

The Studtmanns visited the site daily and were fully aware of the progress of the work. The monthly materials listing from the Building Center and the daily site visits provided them with the information necessary to verify actual construction with the negotiated quantity and quality of construction. The evidence showed and the court found that they were fully aware that extras were being included as the work progressed. At the trial, the Studtmanns acknowledged that they knew of most of the extras and had talked with the contractor about them at the time. Their primary objection was over price. Because they did not object to the extras, they were responsible for payment.

Implied Knowledge. Implied knowledge is gathered by implication or necessary deduction from the circumstances, the general language, or the conduct of the parties. While this type of knowledge may not be complete in and of itself, it is sufficient to gain attention and put the owner on guard and call for further investigation. Implied knowledge is illustrated by the case of Hoel-Steffen Construction Company v. United States. The case concerns the construction of the Gateway Arch of the Jefferson National Expansion Memorial in St. Louis, MO. Several contractors were simultaneously involved with the construction. Hoel-Steffen contracted with the Interior Department to construct various interior features of the arch including the duct work. Working space inside the arch was limited which resulted in substantial interferences between contractors. Some contractors received preferential access to the construction site in a way that was not specified in any of the contract documents. The court stated:

> Where duct work contractor...brought dispute between the prime contractor, transportation system subcontractor and duct work contractor to the government's attention, it was the contracting officer's duty to take action to remedy the difficulty; it was not necessary that duct work contractor specifically accuse the government of "unreasonable or unfair measures in attempting to resolve the problem," it was enough...that the government knew or should have known that it was called upon to act.[5]

The court decided that sufficient information had been received to alert the owner that action on its part was required to minimize the effects of the interference by the

other contractors.

Imputed Knowledge. Imputed knowledge is established when a person in an organization is given actual notice of a fact or circumstance and that person has the duty to report it to the person affected. The case of Powers Regulator Company, GSBCA Nos. 4668, 4778, 4838 provides further insight into how courts recognize imputed knowledge.

The contract provided for Powers to install emergency control centers in three Social Security Administration Program Centers constructed for the Public Building Services, General Services Administration. The specifications were highly technical and the installation was complex. The court found that:

> Notice of a specification dispute to a supervising architect employed by the government constituted notice to the contracting officer within the meaning of the changes clause of the contract. The regional architect on the project had the authority to approve or reject the contractor's submittals. Under the circumstances, the actual notice of the architect who had authority to issue changes could be imputed to the contracting officer because the architect was the technical expert to the contracting officer and this was a highly technical claim. The law is settled that a directive need not come from the contracting officer personally, and that he need not necessarily even be aware of it...[6]

The court apparently felt that the circumstances were of such importance that it was the duty of the supervising architect to communicate the problem to the contracting officer. However, had the dispute not been of a highly technical nature, the court may have felt otherwise. But, if the person who made a decision or knew of a contractor's

predicament was properly acting within his authority, the owner can be committed by his agent's actions without being aware of the situation personally. The court further stated in the Powers case that:

> We thus hold that the contracting officer cannot insulate himself from the operating level by layer of construction managers, architects, and consultants, then disclaim responsibility for the actions of one of his agents because the contractor failed to give him notice.[7]

Implied and imputed knowledge will not always be found to exist. Obviously, the outcome is very dependent on the facts. Certainly, the courts will carefully examine the technical nature of the problem, authority of those involved, and the project management structure before deciding if the knowledge requirement has been satisfied.

Additional Compensation Expected

Mere knowledge that additional expenses are being incurred is not sufficient to make the owner liable for the cost increases. Extra work may be due to contractor error, and the courts have held that if the owner is unaware that the contractor expects additional compensation for the "extra" work, he will not be liable for the costs. Two separate cases illustrate this important point.

In Watson Lumber Company v. Guennewig, 226 N.E.2d 270, the Guennewigs contracted with Watson Lumber Company for the construction of a four bedroom, two bath house. The

Guennewigs provided the plans and Watson provided the bid and specifications based upon those plans. After substantial completion, the contractor claimed a right to extra compensation with respect to no less than 48 different and varied items of labor and/or materials. In discussing the issue of payment for extras, the court established the following five conditions as prerequisites:

> The law assigns to the contractor, seeking to recover for "extras," the burden of proving the essential elements. That is, he must establish by the evidence that (a) the work was outside the scope of his contract promises, (b) the extra items were ordered by the owner, (c) the owner agreed to pay extra, either by his words or conduct, (d) the extras were not furnished by the contractor as his voluntary act, and (e) the extra items were not rendered necessary by any fault of the contractor.[8]

The first three elements deal with owner approval of the item, and the last two establish whether the owner was aware that the contractor expected additional compensation for the "extras." The owner was apparently aware that some of the items were not called for in the contract. Regarding the issue of the Guennewigs knowing that Watson would later request compensation, the court stated that:

> The evidence is clear that many of the items claimed as extras were not claimed as extras in advance of their being supplied. Indeed, there is little to refute the evidence that many of the extras were not the subject of any claim until after the contractor requested the balance of the contract price, and claimed the house was complete. This makes the evidence even less susceptible to the view that the owner knew ahead of time that he had ordered these as extra items and less likely that any general conversation resulted in the contractor rightly believing extras had been ordered.[9]

The owner's right to know that the contractor expects

extra compensation is directly related to the owner's right to control his liabilities and to be protected against the contractor voluntarily going ahead with extra work and then charging the owner. The court stated that mere acceptance by the owner does not create a liability for the additional cost. Specifically,

> The contractor must make his position clear at the time the owner has to decide whether or not he shall incur extra liability. Fairness requires that the owner should have the chance to make such a decision.[10]

Watson also argued that the Guennewigs implied they would pay for the extras. To this, the court applied another important principle.

> Mere acceptance of the work by the owner...does not create liability for an extra....More than mere acceptance is required even in cases where there is no doubt that the item is an "extra"...[11]

Another case that presents this consideration from a different perspective is Schnip Building Company v. United States. The contractor was contracted to build a hobby shop at the navy submarine base at Groton, Connecticut. The contract documents showed rock and provided for precision blasting and excavation. The smooth rock face was to serve as the concrete formwork and was intended to save the expense of man-made wooden forms. During construction, the contractor had to remove excessive excavation spoil caused by overbreak from the blasting operation. He also sought and received approval from the government representative to alter the formwork requirements so he could use wooden

forms. The dispute concerned subsurface conditions which the contractor later alleged differed materially from those represented in the contract drawings and specifications. The court found that

> ...(the government representatives) were personally unaware of existence of such conditions, and that their observations at the jobsite did not alert them to such condition... The plaintiff infers that the government should have known of the changed conditions as they were obvious. Whether the government representatives reasonably should have known from the circumstances that subsurface conditions differing from those described in the contract documents were being encountered was a question of fact. The (contractor's) extensive backfill and grade fill requirements could have been caused either by a subsurface condition or by improper blasting technique. The Board considered the evidence and said that it was "unable to charge the Government with constructive knowledge under these circumstances." The burden was on the appellant to prove to the government when such extensive fill needs existed. The government had no obligations to ferret out the reason.[12]

The Schnip case is particularly instructive because it establishes that owner knowledge alone is insufficient to satisfy the notice requirement. The owner representative was present daily and was fully aware that additional costs were being incurred. However, a reasonable person could have inferred that the extra excavation and formwork costs were caused by an inexperienced blasting subcontractor or other contractor caused problems rather than from differing site conditions. The court clearly assigned to the contractor the duty to ensure that the government was aware of the conditions and that the contractor expected additional compensation. The contractor's failing in this

case was not being specific and assigning the cause of the additional costs to the differing site conditions.

Form of Notice

Where the owner was aware or should have been aware of the situation, knew the contractor expected compensation under some provision of the contract, and there exists some form of communication that is signed, then the courts will likely find that the notice provisions will have been satisfied. Normally, a formal letter is anticipated; however, other forms may suffice. Thus, it is important to realize the various forms of written communication.

Various courts have found that notice has been served by

1. Letters from the contractor which required but did not receive owner response.
2. Regularly updated CPM network schedules, required by the contract, that properly assigned the responsibility for delay.
3. Minutes of project meetings submitted by the contractor for review and approval which noted discussions about problems requiring notice.

The above discussion indicates that written and signed notice can exist in various forms. But, what if documents exist that are not signed? And, what if the notice was

orally communicated? No cases were found that dealt specifically with these issues.

Timing of Notice

The timeliness of the notice is the final consideration in determining if the intent of the notice provision has been met. Occasionally an owner can have knowledge that there is a situation outside the contract for which the contractor expects additional compensation, but that knowledge becomes available so late so as to prejudice the owner. The Schnip Building Company case also illustrates this point. Notice was not effectively given until the contractor filed his claim which was long after the work was completed. The court stated:

> The lack of a timely notice was prejudicial to the Government because it effectively prevented any verification of appellant's claim and also the employment of alternate remedial procedures.[13]

In the Powers case the Board stated:

> Regardless of terminology, the issue is whether the government has been unnecessarily put at risk - either the risk of additional liability to the contractor or the risk of being unable to prepare and present its defense against the contractor's claim - by the contractor's delay in notifying the government of pertinent facts.[14]

Clearly, the notice must be provided in time for the owner to make an independent assessment of the situation, decide what action to take, and to monitor the additional work if desired. This right to control one's liabilities is

the key consideration in determining timeliness. Generally, if the contract specifies a time limit and the contractor is several days late in filing notice, he will not be precluded from recovery so long as the owner still has the opportunity to control his liabilities other than for minor inconveniences.[15]

If the above issues have been adequately addressed, the courts will find that the intent of the notice provision has been satisfied, thus allowing the contractor to pursue the more relevant questions of entitlement. Notice that the above issues were addressed without the need to introduce the concept of prejudice. Indeed, if the above conditions are met, the owner will not have been prejudiced and the question is irrelevant.

Owner Prejudice

To this point, raising prejudice as an issue only serves to confuse the dispute resolution process. However, what if one or more of the conditions have not been met? Can the contractor still recover? When confronted with this situation, some courts will further examine the facts to determine if the owner has actually been prejudiced. It is worth noting that not all courts will address this question.

Even though constructive notice may not have been provided, situations can arise where the owner may not have

been prejudiced. Here, the contractor must show that the owner would not have acted differently had notice been properly communicated. A case illustrating this consideration is Sante Fe, Inc., VABCA Nos. 1898 and 2167. The contract called for the construction of a 520-bed hospital at the Veterans Administration Medical Center in Bay Pines, Florida. The dispute involved the proper installation of lighting fixtures. The Board of Contract Appeals stated:

> Boards of contract appeals, in practice, will not enforce this technical clause [notice provision] absent a showing of prejudice by the Government. The Government has the burden of proving that prejudice resulted from its lack of written notice. To meet its burden, the Government must demonstrate affirmatively "how the passage of time in fact obscured the elements of proof" or "how the Contracting Officer might have minimized or avoided possible extra expenses"...There is no indication that the Government would have acted differently, with respect to its rejection, regardless of a notice of claim. That is, the lack of written notice does not prejudice the Government.[16]

The Sante Fe case may not reflect the wide spread judicial attitude because even though the government had no other alternative, it nevertheless was not afforded the opportunity to document the actual costs to the government. Also, the courts are not consistent upon whom rests the burden of proof of prejudice.

Waiver

If the intent of the notice provision has not been satisfied and the owner has been prejudiced, the only recourse available to the contractor is to show that the requirement has been waived. An owner by his actions or inactions can waive his right to notice. In legal terms, it is said that he will be estopped from exercising his right to insist on notice. The terms waiver and estoppel are closely related. These will first be defined and their similarities and differences explained prior to illustrating the concepts with several cases.

Waiver is the intentional or voluntary relinquishment of a known right or conduct that infers that the right has been abandoned. Waiver is unilateral and results from some act or conduct of one party against whom that party operates, and no action by the other party is necessary to complete the waiver. Thus, waiver can be created only by the owner, and no action on the part of the contractor is required.

Sweet divides the question of waiver into three subissues:[17]

1. Is the requirement waivable?
2. Who has the authority to waive the requirement?
3. Did the facts claimed to create waiver lead the contractor to reasonably believe that the

requirements have been eliminated or indicate that the owner intended to eliminate the requirements?

Is the Requirement Waivable? If there are statutes or ordinances requiring written notice, then it cannot be waived. This would most likely occur where the owner is a municipality, township, school board or some other public entity. Statutory requirements are seldom an issue.

Authority to Waive. The contract provision requiring written notice can only be waived by the owner or his designated representative. In the case of Crane Construction v. Commonwealth of Massachusetts, the court determined the architect had no authority to waive the notice requirements and precluded contractor recovery.[18]

Conditions of Waiver. To understand how waiver is created, it is worthwhile to examine the meaning of waiver. As defined by Black's Law Dictionary,

> A waiver is implied where one party has pursued such a course of conduct with reference to the other party as to evidence an intention to waive his rights or the advantage to which he may be entitled...provided that the other party concerned has been induced by such conduct to act upon the belief that there has been a waiver, and has incurred trouble or expense thereby.[19]

Normally, waiver of a right requires a consideration in return from the other party. However, in construction contracts as it pertains to notice requirements, a

consideration is not required. Waiver is a voluntary, unilateral action. Only the owner can waive the right to notice, and no action is required from the contractor.

In construction contract disputes, waiver is the first step in a two-step process, the second step being that of estoppel. Waiver leads to estoppel when a party relies upon the waiver and acts upon it. For example, an owner voluntarily waiving a right can be estopped from reasserting that waived right. Thus, the two step process of the owner waiving a right and the contractor acting upon it prevents the owner from reasserting that right.

The principles of waiver and estoppel are illustrated in the case of E. C. Ernst, Inc. v. Koppers Co., Inc.[20] Koppers was the turnkey prime contractor. Ernst was the electrical subcontractor.

Koppers was responsible for the design and construction of an A-5 coke oven battery and related facilities at Aliquippa, PA. The oven was to be used to produce coke as part of the steel making process. Koppers was nearing completion of a similar facility in the Midwest and was using that design as a basis for the Aliquippa project.

The technology was state-of-the-art. Throughout construction, Koppers was altering the design to incorporate lessons learned from the Midwest facility which was experiencing numerous start-up problems. All drawing revisions delivered to Ernst by Koppers were marked

"Approved for Construction." Due to the design changes coupled with requests from the owner and engineering difficulties on Koppers' part, Ernst's actual manhours were more than double the original estimate.

A provision of the electrical subcontract required that any requests for additional compensation be submitted to Koppers within 30 days after receiving revised drawings. Due to the volume and magnitude of the changes received from Koppers, Ernst was unable to realistically comply with the 30-day requirement. Ernst wrote Koppers and asked Koppers to waive the 30-day requirement. Koppers did not respond to Ernst's letter. Ernst wrote again stating that since there had been no response to the earlier letter, Ernst assumed that Koppers was waiving the 30-day requirement. Again, Koppers did not respond, despite the letter being circulated internally among several departments. The court stated:

> We find that the conduct of Koppers in failing to insist on the 30 day notice provision in light of their "approved for construction" orders to precede and their failure to reply to Shannon's [Ernst's superintendent] letters, prevents Koppers from now using this clause as bar to Ernst's actions.[21]

By first failing to respond, Koppers waived its right to insist on notice. Further, by Ernst's continued performance under the contract in reliance on Koppers' silence, Ernst gave up its ability to comply with the 30 day limit on a major portion of its work. Koppers knew that the "extras" were not being priced or given written authorization as required by the contract, yet they

willingly accepted Ernst's performance. Koppers was thus prevented (estopped) from using the notice clause as a defense to avoid payment to Ernst for delay damages and compensation for extra work.

There are other ways an owner can waive the notice requirements. If the owner pays for extra work where the notice was not provided, it will be precluded from insisting on notice for extra work performed thereafter.

Summary of Notice Requirements

Relative to notice requirements, there is substantial consistency among the court decisions investigated. In evaluating if the intent of the notice provision has been satisfied, courts rely much more on the content of the notice than the form in which it was provided. If the owner or his agent is aware of the situation, knows that the contractor expects extra compensation, and the notice is communicated in a timely manner, the intent of the notice provision will be satisfied. If not satisfied, some courts will further seek to determine if the owner has been prejudiced. The only other alternative to the contractor is to show that the condition was waived by the owner. While Figure 2 shows waiver as the last criterion in the flowchart hierarchy, most courts appear to consider this question almost immediately, second only to the applicability of

notice requirements. Cases are often determined on the issue of waiver, and courts appear willing to evaluate the easiest considerations first. While waiver is apparently easier for courts to determine, it is more difficult for a contractor to establish. A contractor establishes a firmer dispute foundation by demonstrating compliance with the intent of the notice provision.

Caution admonishes that there is no uniformity among the host of construction contracts the contractor will encounter either in the number of days of notice required or in the number of days in which the other party is required to respond to the contractor notice. Therefore, two steps should be taken. First, study each construction contract anew to ascertain the specific notice requirements. Secondly, be cautious of supplemental provisions that may change the boiler plate notice language of the standard contract.

CHAPTER 4

ORAL CHANGE ORDERS: PURPOSE AND RELEVANT ISSUES

Purpose of Written Change Orders

After formation of a construction contract, unexpected situations typically arise. As stated by Sweet,

> "The contract documents are at best an imperfect expression of what the design professional and owner intend to be performed by the contractor...After award of a construction contract, the owner may find it necessary to order changes in the work."[1]

To attain the goal of a complete and usable facility, flexibility must be incorporated into the contract to allow the owner to react to those unanticipated situations.

Construction contracts almost always include provisions allowing the owner to order changes in the work without invalidating the contract. The mechanism used to formalize changes is the change order. Procedures define how changes are made. These procedures written in the contract documents, serve to protect both the owner and contractor. For instance, change orders are required to be in writing. Other provisions may also be included to govern how the contractor is to respond if he feels he is being ordered to perform extra work. The purpose of these procedural requirements is essentially the same as the requirement for notice.[2] That is, the owner has the right to know the

nature and extent of his promises and liabilities. The requirement for written change orders protects the owner from unknowingly incurring a liability through the course of routine interpretations of the contract documents and normal interaction with the contractor.

Contract Language

The essential elements of the contract clauses related to written change order requirements are:

1. Only persons with proper authority can direct changes
2. The form of directive must be in writing
3. The directive must be signed by a person with proper authority
4. Procedures for communicating the change are stated
5. Procedures for contractor response are defined

The relevant contract clauses for the four standard contract forms are summarized in Tables 6 through 9. In each, authority is granted to the architect, contracting officer or engineer. All require that the directive be written. Since the AIA and EJCDC documents are used in situations where the owner is represented by an agent, both require the directive to be signed by the owner. Thereafter, the change is issued to the contractor through the architect or engineer. The implication is that neither

TABLE 6

Comparison of American Institute of Architects (AIA)
Standard Specification (c) 1976
Requirements Involving Change Orders

Situation & Document Reference	Change Order Element	Contract Requirement
Differing Site Conditions A201, Para. 12.2.1	Authorization Form	Owner Change order
	Signed by	Owner and Architect
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Extra Work A201, Para. 12.3.1	Authorization Form	Owner Change order
	Signed by	Owner and Architect
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Variation in Estimated Quantities A201, Para. 12.1.5	Authorization Form	Owner Change order
	Signed by	Owner and Architect
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Minor Changes A201, Para. 12.4.1	Authorization Form	Architect Order
	Signed by	Architect
	Communication Procedures	Written
	Contractor Response	Carry out promptly
Changes A201, Para. 12.1.2	Authorization Form	Owner Change order
	Signed by	Owner and Architect
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement

TABLE 7

Comparison of Federal Acquisition Regulations (FAR)
Standard Specifications (1985)
Requirements Involving Change Orders

Situation & Document Reference	Notice Element	Contract Requirement
Differing Site Conditions FAR 52.236-2	Authorization Form Signed by Communication Procedures Contractor Response	Contracting Officer Contract Modification Contracting Officer Written Contractor signature indicates agreeement
Extra Work FAR 52.243-4	Authorization Form Signed by Communication Procedures Contractor Response	Contracting Officer Order Contracting Officer Oral or Written Provide written notice
Variation in Estimated Quantities FAR 52.212-11	Authorization Form Signed by Communication Procedures Contractor Response	Contracting Officer Contract Modification Contracting Officer Written Contractor signature indicates agreeement
Minor Changes	Authorization Form Signed by Communication Procedures Contractor Response	Not separately identified. Included under Changes clause.
Changes FAR 52.243-4	Authorization Form Signed by Communication Procedures Contractor Response	Contracting Officer Contract Modification Contracting Officer Written Contractor signature indicates agreeement

TABLE 8

Comparison of Engineers Joint Contract Document Committee (EJCDC) Standard Specification (1983) Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Differing Site Conditions Para. 4.3.2	Authorization	Engineer
	Form	Change contract documents
	Signed by	Engineer
	Communication Procedures	Written
	Contractor Response	Not specified
Extra Work Para. 11.2	Authorization	Engineer
	Form	Change order
	Signed by	Owner
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Variation in Estimated Quantities Para. 11.3.	Authorization	Engineer
	Form	Change Order
	Signed by	Owner
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Minor Changes Para. 9.5	Authorization	Engineer
	Form	Field order
	Signed by	Engineer
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement
Changes Para. 11.2	Authorization	Engineer
	Form	Change Order
	Signed by	Owner
	Communication Procedures	Written
	Contractor Response	Contractor signature indicates agreeement

TABLE 9

Comparison of Pennsylvania Department of Transportation (PennDOT) Standard Specification (1983) Requirements Involving Notice

Situation & Document Reference	Notice Element	Contract Requirement
Differing Site Conditions	Authorization Form Signed by Communication Procedures Contractor Response	DSC clause is not included in the standard PennDOT specifications
Extra Work Para. 104.03 & 110.03	Authorization Form Signed by Communication Procedures Contractor Response	District Engineer Work order District Engineer Written Contractor signature indicates agreeement
Variation in Estimated Quantities Para. 104.02 & 110.03	Authorization Form Signed by Communication Procedures Contractor Response	District Engineer Work order District Engineer Written N/A
Minor Changes Para. 104.02 & 110.02	Authorization Form Signed by Communication Procedures Contractor Response	Engineer Work order Engineer Written N/A
Changes Para. 110.03	Authorization Form Signed by Communication Procedures Contractor Response	District Engineer Work order District Engineer Written Contractor signature indicates agreeement

the architect or engineer can unilaterally order changes. The FAR and PennDOT documents specifically state that the inspector has no authority to order changes. Procedures for contractor response were discussed in Chapter 2. Thus, each document clearly addresses the elements of change listed above. There is little difference between the content of the four documents.

Definition and Classification of Change Orders

The study of change orders is most convenient when viewed in two parts, the change and the order. A change is a requirement beyond the boundaries of the contract documents. An order is a directive from the owner to the contractor to perform the change. Pertinent issues related to the order (directive) are the main focus of Chapters 4 and 5. However, it is worthwhile to briefly cover the essential characteristics of the change itself.

The change relates to the element that deviates from the contract documents. Changes can arise from many sources and various situations are covered by different parts of the contract documents. A diagram outlining the hierarchy of changes is shown is Figure 3. Reasons for changes and circumstances surrounding them are diverse, and importantly, the common law and rules governing entitlement depend upon the origin and type of change and the contract language.

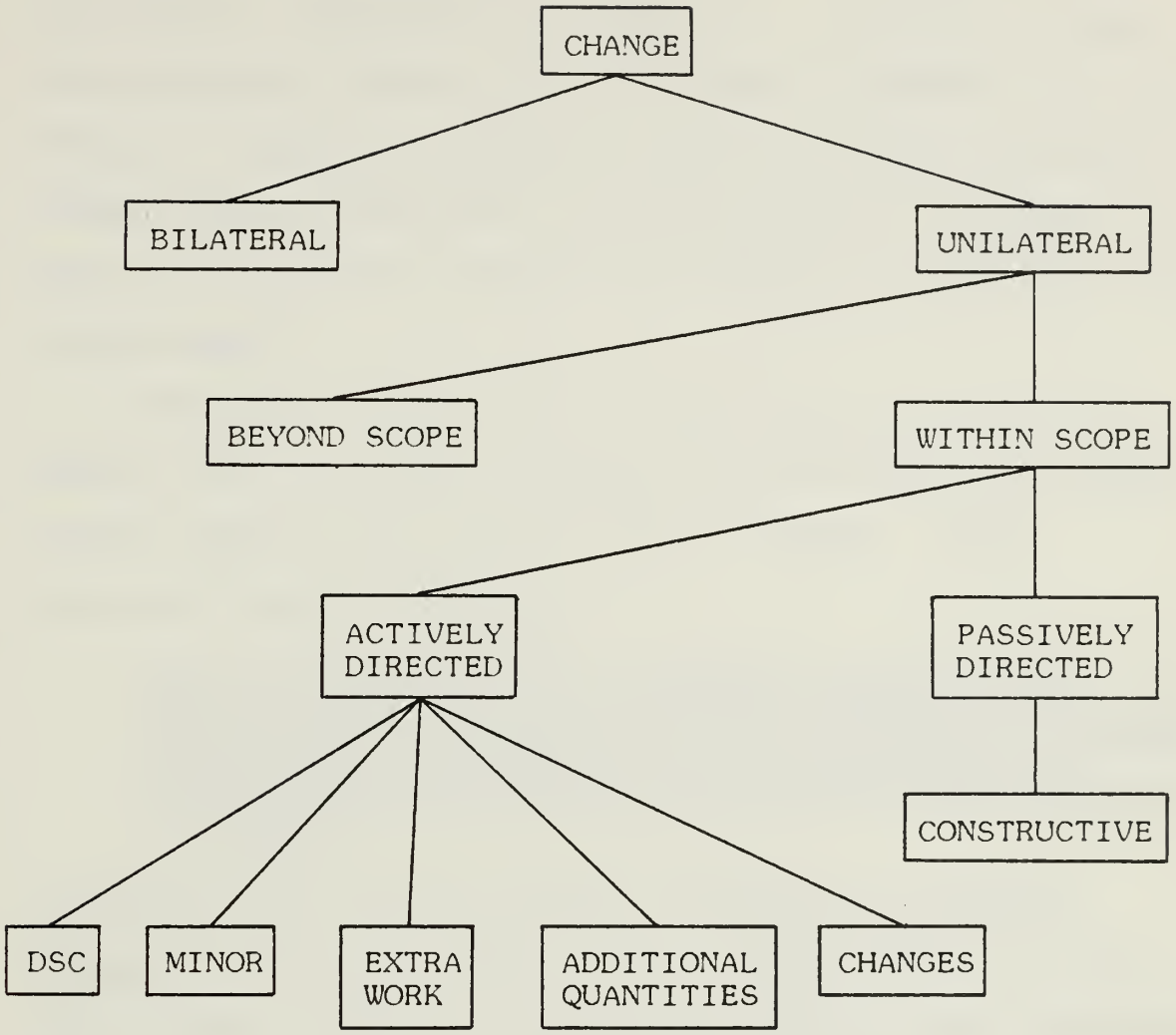


FIGURE 3

Change Order Hierarchy

As shown in Figure 3, changes can be classified as bilateral or unilateral modifications. Bilateral changes are beyond the contract scope and must be agreed to by both parties. Bilateral changes do not fall within the changes clause, and the contractor is not obligated to perform the work. A discussion of bilateral changes is beyond the scope of this paper.

Unilateral changes can be both within and beyond the general contract scope. Changes that are beyond the scope of the contract are called cardinal changes. Rubin clarifies cardinal changes:

> One ruling states that a "cardinal change has been found to exist when the essential identity of the thing contracted for is altered or when the method or manner of anticipated performance is so drastically and unforeseeably changed that essentially a new agreement is created."[3]

It follows that if the project is altered by cardinal changes to the point that it is no longer the same as bid upon by the contractor, then the contractor is not obligated to perform. However, cardinal changes can arise in many ways, and often cannot be recognized until after the fact. Therefore, making generalities relative to how they will be evaluated by a court is indeed risky.

A unilateral directive by the owner that makes changes within the general contract scope is the most common type of construction change. The changes clause in the contract is applicable. Changes can be actively or passively (tacitly) directed by the owner. Active direction is communicated

either orally or in writing, while passive direction (constructive change) is communicated by conduct or by inaction when some action is required. The line separating active and passive communication is often obscure and is sometimes confused in the literature.

Most disputes arise where the contractor believes he has been directed to perform work outside of the contract scope, but the owner refuses to acknowledge the change. When the change involves oral directives, the principle questions are:

1. Was the owner properly notified?
2. Is the contractor entitled to additional compensation through some provision of the contract?
3. Was a constructive change ordered by a valid oral change order?

The notice question was addressed in Chapters 2 and 3. Questions involving entitlement are a function of the type of change and the contract language. Applicable rules differ depending on whether there is extra work, a differing site condition, defective specifications, errors and omissions, large changes in quantities, and so forth. If the work in question is within the contract scope, then there is generally no entitlement unless, for example, the contractor was directed to alter his methods. Questions involving oral directives can arise when the work is within

or beyond the contract boundaries, and it must be determined if the work was directed or done voluntarily.

Issues Related to Oral Change Orders

Changes are common, yet disagreements often arise for a variety of reasons. In dealing with changes, Simon suggests that the following questions are relevant:

1. What does the contract state?
2. Does the changes clause apply in this instance?
3. Assuming that it does apply, have you complied with it?
4. Assuming it does apply and you have not complied, what are the exceptions to the enforcement of the clause?
5. Have you complied with an exception?
6. Assuming that you have not complied with an exception, do you have an equitable basis on which to argue for the establishment of still another exception?[4]

The first question has already been considered by examining the four standard contract documents. The remaining questions will be briefly discussed below.

Does the Changes Clause Apply?

If the change is found to be beyond the general contract scope (a bilateral or cardinal change), the literature suggest that the formal contract requirements controlling how the change is to be issued may not apply. Otherwise, the changes clause is usually applicable.

Has There Been Compliance With the Changes Clause?

Despite variations in contract language, two criteria seem to decide if the changes clause has been satisfied. These are proper authority and satisfying the intent.

Proper Authority.It is essential that the person directing the change has the authority to do so. Stokes states:

> An owner of a construction project needs to make certain that the contract documents specify who has authority to order changes in the work. An owner must retain control over changes to the contract. The owner does not want to be liable for changes that were ordered by someone who had no authority to do so.[5]

Change authority is normally specified in the contract documents as the owner or his designated representative. The four standard contract forms each include specific references about authority. However, authority may also be apparent or implied from the responsibilities or conduct of an individual or party. If the situation leads a contractor

to reasonably infer that a certain individual has authority to direct changes, then authority may be imputed him.

Intent of Changes Clause Satisfied. Changes are usually directed by issuing a signed, written change order. Relative to the directive, Simon states, "Many contracts provide that there be a "signed," "written," "order."[6] He further states:

> Since most contracts do not specify the format for the writing, various documents might, in the judge's discretion, constitute the writing so as to fulfill the "written" portion of the clause requirement. That writing might be found in letters, transmittal notices, revised plans and specifications, notations on shop drawings, job minutes, field records, daily reports, signed time and material slips, internal memoranda, or other documents...The next consideration is to determine whether the words written order require a "written order" or a "written" "order." If they are read together as a single phrase (which they are not), the owner's furnishing a sketch, revised drawing, or a new plan, along with the oral directive to perform the work "or else," would not fulfill the technical requirements. However, if the words are interpreted to mean that both a writing and an order must exist, the sketch and oral directive would suffice.[7]

The literature suggests that the above consideration determines if the owner's rights have been protected. The tendency of the courts is to require a writing and an order. Thus, an oral direction must be supplemented by other conditions to show that the owner directed, had knowledge of, and approved the change and that something written exists.

Exceptions to the Clause

The exception most often mentioned in the literature is that of waiver. That is, the owner has waived his right to insist that the change be reduced to writing. In this regard, the issue of change differs from that of notice. Notice is viewed as a contractual technicality or procedure. However, a change is an alteration to the basic contract involving considerations (exchange of value). Therefore, courts may proceed more cautiously when dealing with waiver of rights relative to changes.

A relevant question is can the right or condition be waived? This question is most important when the owner is a public agency because the owner representative may be acting within his or her contract-specified roles but may be directing changes that are beyond the authority granted by regulations and statutes. An example is provided by Simon:

> Determination of the authority is not as easy as it may appear on the surface. In Blum v. City of Hillsboro, supra, the Mayor, City Council and Architect all approved the change. They are proper parties and have apparent and actual authority; however, external limitations (the bidding statutes) placed a different form of prohibition on that authority. This might be called an artificial limitation on authority, but to those involved in the construction process, when they are unable to be paid for what otherwise appears to be a properly authorized, issued and executed change order, that is not an artificial barrier. It is very real.[8]

Relative to the authority issue, statutes will always

prevail over the contract language. The prudent contractor should be fully aware of the local statutes and regulations.

Compliance with Requirements of the Exception

It is usually more difficult for the contractor to prove an exception than to show compliance. In asserting an exception, the contractor must prove both the existence of the exception and compliance with the requirements of the exception. The following conditions are pertinent:

1. Direction is clear and/or of a satisfactory character.
2. Owner approves the work being performed.
3. Owner authorizes or allows the work to proceed.
4. Distinct agreement between parties that the work is not required by the original contact.
5. Definite agreement to pay for the change.[9,10]

If a contractor is unable to justify performance based upon the oral direction by any of the above conditions, he has little recourse other than to seek recovery on the theory of equity. Simon states:

> The entire argument and presentation of exception is guided by principles of equity and the effectiveness of a non-written modification in spite of a contract condition that modifications must be written depends upon whether enforcement of the condition is or is not barred by equitable consideration, not upon technicality of whether the condition was or was not expressly and separately waived before the non-written modification. [Universal Builders, Inc. v. Moon Motor Lodge, Inc. 224 A.2d 10 (1968)].[11]

However, the topic of equity receives little discussion in the literature, and a lengthy review of court cases indicates that most courts seldom render decisions in favor of the contractor based on equity.

Clauses Specifically Precluding Oral Direction

Some contracts specifically prohibit oral directives in an attempt to prevent the owner's waiver of the written change order requirements. However by attempting to limit the owner's exposure to disputes involving oral change orders, the owner's flexibility to make changes in immediate situations is also reduced. Sweet states that many attempts to contractually prevent subsequent changes are ineffective. He further indicates that rather than seeking to bar waiver of the written change order requirement, a more effective approach is to allow reinstatement of the requirement following a designated grace period.[12]

Contract Formation Principles

Issues related to oral change orders are viewed differently from notice requirements because change orders are alterations to the basic contract agreement. Conversely, notice is a technicality of contract execution. To fully understand how the courts view change orders, it is

necessary to review the basic principles of contract formation. To be a valid contract, the following elements are essential:

1. Competent parties
2. Proper subject matter
3. Reasonable certainty of terms
4. Offer and acceptance
5. Considerations

Additionally, contracts for certain types of transactions may need to be in writing. Three of the most relevant elements are discussed below.

Offer and Acceptance

There must be an offer and an acceptance for a valid contract to exist. The acceptance must be clear, absolute and unqualified. A qualified acceptance or a counteroffer is a new proposal.

Considerations

Valid contracts require considerations or an exchange of something of value, what Sweet refers to as the preexisting duty rule. Courts have difficulty in validating change orders where there has been no such exchange, however, there are several exceptions. Sweet states:

> This preexisting rule is criticized. It limits the autonomy of the parties by denying enforceability of agreements voluntarily made. Implicit in the rule is an assumption that an increased price for the same amount of work is likely to be the result of expressed or implied coercion on the part of the contractor, as if the contractor is saying "pay me more money or I will quit and you will have to whistle for the damages." However, suppose the parties have arrived at a modification of this type voluntarily. There is no reason for not giving effect to their agreement.[13]

Form

Statutes sometimes preclude oral changes. This is particularly true for public agencies and local governments and authorities. Where there are no governing statutes or regulations, oral contracts can be created. Yet, most contracts contain explicit provisions stating that changes must be written. While most do not expressly preclude oral change orders, that is clearly the intent. In appraising the importance of limiting the form of change orders to written directives, the Supreme Court of Iowa in quoting from the Corpus Juris Secundum stated:

> Such a provision (requiring it to be in writing), however, is not of the essence of the contract, but is a detail in the performance...[14]

This view is consistent with legal principles in that oral contracts are valid so long as the other elements of contract formation are present.

Quoting from the sixth volume of Ruling Case Law, pp. 914 and 915, the 4th Circuit Court of Appeals affirmed that oral changes are valid:

> Moreover, though the parties to a contract may stipulate that it is not to be varied except by an

> agreement in writing, they may, by a subsequent contract not in writing, modify it by mutual consent. One who has agreed that he will only contract by writing in a certain way does not thereby preclude himself from making a parole (sic) bargain to change it. There can be no more force in an agreement in writing not to agree by parole (sic) than in a parole (sic) agreement not to agree in writing, and every agreement of that kind is ended by the new one, which contradicts it.[15]

Thus, the 4th Circuit Court of Appeals court went beyond the Supreme Court of Iowa court by stating that oral modifications are still valid even though there may be language prohibiting oral changes.

Further quoting from the case of Illinois Cent. R. Co. v. Manion, 113 Ky. 7, S.W. 40, 101 Am. St. Rep. 345, the court stated:

> Though the written contract has a clause forbidding such oral alteration, and declaring that no change in it shall be valid unless in writing, such provision does not become a part of the law of the land; it is like another agreement which is superseded by a new one. So that in spite of it an oral alteration may be validly made.[16]

Finally, quoting from the case of Bartlett v. Stanchfield, 148 Mass. 394, 19 N.E. 549, 2 L.R.A. 625, the court noted:

> Attempts of parties to tie up by contract their freedom of dealing with each other are futile. The contract is a fact to be taken into account in interpreting the subsequent conduct of the plaintiff and defendant, no doubt. But it cannot be assumed, as matter of law, that the contract governed all that was done until it was renounced in so many words, because the parties had a right to renounce it in any way, and by any mode of expression they saw fit. They could substitute a new oral contract by conduct and intimation, as well as by express words.[17]

Thus, the contract itself does not have the power of

the law even though two parties agreed to bind themselves in accordance with its provisions. Instead, the contract is used by the law to "interpret the subsequent conduct" of the parties and correctly apply the law. Since common law recognizes oral contracts as being valid instruments, unless specifically precluded by statute, the contract itself cannot limit the power of law by preventing oral changes.

CHAPTER 5

ORAL CHANGE ORDERS CRITERIA: LEGAL RULES OF APPLICATION

Over 30 appellate court cases were reviewed to determine how the law views oral change orders. The results show that the courts have dealt with the issue in a consistent manner. The purpose of this section is to present the criteria used by the courts in deciding oral change order disputes. The criteria are presented in Figure 4 with reference cases for the various criteria shown in Table 10. Each criterion is discussed below.

Applicability of Changes Clause

The initial consideration is whether the disputed work is covered by the changes clause. Directed work which is outside the contract scope are categorized by many different names, extra work, additional work, and alterations. Typically, the requirement for a signed, written change order applies to "extra work." If it is found that the nature of the work was not "extra work" but "additional work," the requirement may be circumvented. Obviously, the specific contract language is a deciding factor and the individual clauses addressing these various categories of work must be coordinated. A case illustrating

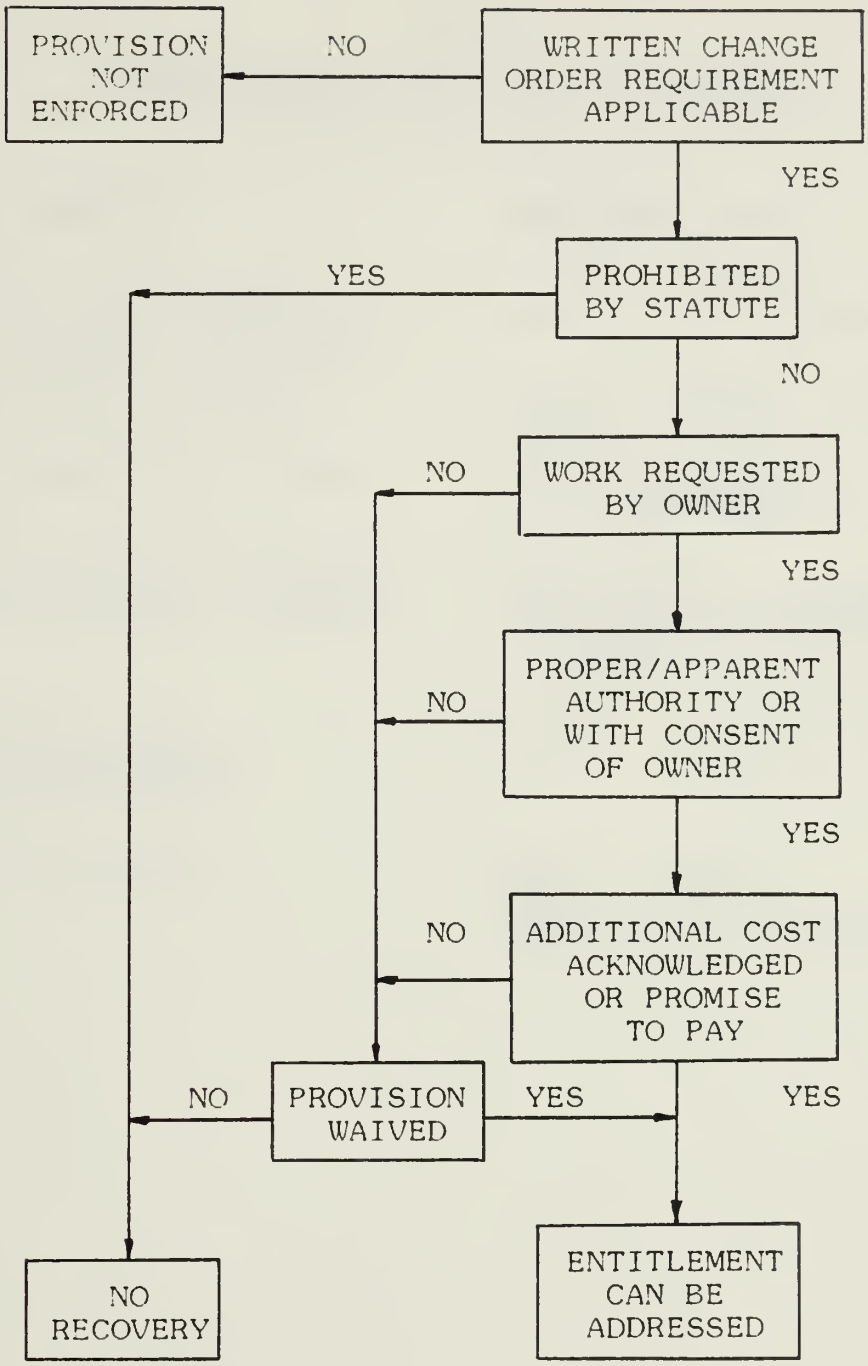


FIGURE 4

Legal Rules of Application Flowchart:
Oral Change Orders

TABLE 10

Legal Rules of Application Flowchart:
Oral Change Order Reference Cases

LEGAL CRITERIA	REFERENCE CASE
WRITTEN CHANGE ORDER REQUIREMENT APPLICABLE	WOOD v. CITY OF FORT WAYNE
PROHIBITED BY STATUTE	UNITED STATES v. SLATER
WORK REQUESTED BY OWNER	WATSON LUMBER CO. v. GUENNEWIG
PROPER/APPARENT AUTHORITY OR WITH OWNER'S CONSENT	THE SAPPHO FLOUR MILLS OF AMERICA, INC. v. AMERICAN STEEL BUILDING COMPANY
ADDITIONAL COST ACKNOWLEDGED OR PROMISE TO PAY	BLAIR v. UNITED STATES
PROVISION WAIVED	RIEF v. SMITH BERG v. KUCHARO CONSTRUCTION COMPANY

this point was heard before the United States Supreme Court.[1]

R. D. Wood and Company was a contractor hired to construct a water distribution system for the city of Fort Wayne, Indiana. Pipe diameters ranged from 4 to 24 inches. A river crossing was also included. The contract contained the typical requirement that no claim for extra work would be considered unless done in response to a written order from the owner. The contract also allowed the owner to alter the quantities and such increases or decreases would be compensated. Finally, the contract specified the engineer as responsible for determining the amount of work and materials authorized for payment, to decide all questions relative to the contract documents, and that his estimate and decision were final.

Wood visited the Engineer's office and reviewed the contract documents. The original plans showed the under river crossing at Calhoun Street. After Wood was awarded the contract but before he began work on the under river crossing, the city relocated the crossing to Clinton Street. The relocation resulted in a increase from two to seven feet of water depth and from a solid bottom to a bottom described as quicksand. The city directed the engineer to accomplish the change but refused to issue any written direction or change order to the contractor. The city promised the extra work would be taken care of at a

later date but subsequently refused the contractor's claim.

The contract documents specified that the owner could direct extra work or make alterations in the extent, dimensions, form or plan of the work. The documents further stated that only claims for extra work done in obedience to a written order of the engineer and trustees would be entertained. No such restriction was placed on alterations to the work.

The court evaluated the contract provisions for extra work and for alterations and determined that the nature of the work was within the alteration clause and not under the changes clause. The contractor was allowed to recover.

The city's intent was probably to have all changes, including extra work and alterations, be authorized only by written direction. However, a loophole existed in the contract that allowed the contractor to recover. Most contracts contain general clauses that effectively close this possibility.

Statutory Requirement for Written Directive

Where statutes and regulations require written directives, the requirement will not be set aside. This was affirmed by the District Court of Alaska which quoted the Corpus Juris Secundum and stated:

> A written contract may, in the absence of statutory provisions requiring a writing, be modified by a

> subsequent oral agreement. 17 C.J.S., Contracts, section 377, page 865, note 36.[2]

This criterion must be carefully weighed when performing work for public agencies, municipalities and authorities. Where regulations exist, there will be no recovery.

Valid Contract Alteration

In most instances, the changes clause will apply and there will be no statutory considerations. Thus, resolving a dispute will be reduced to determining if a valid contract alteration has been created. The formation principles of offer and acceptance and considerations are relevant to this determination. For an offer and acceptance to be created, the owner must have knowledge of the circumstances. The considerations criterion necessitates that the owner be aware that the contractor is expecting compensation. Considerations can also be extended by an implied or express promise to pay. These issues are discussed below.

Owner Knowledge

Of primary importance is whether the contractor was orally directed to do the work or was acting as a volunteer. The case of Watson Lumber Company v. Guennewig illustrates this issue. Quoting from the Corpus Juris Secundum, the

Appellate Court of Illinois stated:

> ...as a general rule, a builder or contractor is not entitled to additional compensation for extra work or materials voluntarily furnished by him without the owner's request or knowledge that he (contractor) expects to be paid therefor.[3]

In the Watson case, some of the extra items were orally agreed to beforehand, some were ratified after the fact, and others were not claimed by the contractor as extras until the dispute arose. The court disallowed those items that were provided by the contractor without the owner's knowledge or consent without considering any other points of law. Thus, owner knowledge is an important prerequisite to recovery.

The Iowa Court of Appeals decided a similar dispute stating that, "Waiver of written change order requirement does not entitle subcontractor to perform extra work without any approval whatsoever."[4] In this case, Nelson-Roth was the owner, UDE was the prime contractor, and Central Iowa Grading (CIG) was an earthwork subcontractor. CIG was orally ordered by UDE to perform numerous changes. The requested work was done, but CIG performed additional work that had not been requested. The claim for this extra work was rejected by both Nelson-Roth and UDE. Even though the owner and prime contractor had disregarded the contract provisions requiring written changes, the court determined that the owner was not liable for changes of which he was unaware.[5]

The issue of an oral directive was involved in a case heard before the Supreme Court of Wisconsin. The case of Supreme Construction Co. v. Olympic Recreation, Inc. involved construction of a bowling alley in which the prime contractor abandoned the project. A subcontractor, Christfulli Company, installed the electrical wiring, lighting, and equipment in the building. The subcontractor sought compensation from the owner for extras performed at the oral direction of the prime. The changes in electrical work were not readily apparent, and it was unlikely that Olympic would have been aware that they were being done. The testimonies presented were inconsistent, and the court was unable to establish a sound basis for compensation for the extras. The court placed the burden of proof on the subcontractor claiming the extra, and he was unable to prove that Olympic Recreation knew of the work. Therefore, he was not entitled to recovery.

Additional Compensation Expected or Promised

An owner through the course of administering a construction contract, may be aware of various conditions involving additional costs, yet he may not be aware that the contractor expects additional compensation. Courts have determined that mere knowledge of additional work is insufficient to assure recovery of extra costs. The next

consideration for a valid oral contract is whether the owner knew the contractor was expecting additional compensation or the owner impliedly or expressly agreed to pay for the additional cost of the extra work. The contractor will be precluded from recovering additional costs if the owner did not know the contractor expected additional compensation. A case heard before the Federal District Court in Alabama illustrates this essential criterion.

The government contracted with Mr. Algernon Blair to dismantle certain prefabricated buildings located at Granada, Mississippi and transport them to Key West, Florida. There, the buildings were to be reassembled by the contractor. During the reassembly phase, a hurricane struck Key West and caused considerable damage to some of the buildings. The owner telephoned the contractor's representative and directed him to protect the work and repair the damage. In ordering the work no agreement was made to pay for the additional cost but the question of liability for that cost was deferred until later. Ten days following the oral direction, the government sent a letter to Blair stating in part,

> In view of the foregoing, you are advised that the Contractor will be expected to complete the project in accordance with the terms of the Contract, without any additional cost to the Government as a result of damage caused by the hurricane.

Upon completing the work, the plaintiff requested additional compensation based on the oral direction. However, the

government had never agreed to pay for the additional work and had no reason to believe the contractor expected additional monies for the repairs. In deciding for the government, the court stated:

> Where contract provides that there shall be no charge for extra work unless a written agreement is made therefor, the builder cannot recover compensation as for extra work on account of alterations made at the oral request or consent of the owner but for which no written agreement to pay additional compensation is made.[6]

In the case of Berg v. Kucharo Construction Company, the issue was that of a promise to pay. The project involved construction of over two hundred and fifty apartment buildings and houses for the Federal Housing Administration. Berg, the plaintiff subcontractor, had a contract with Kucharo Construction Co., the prime contractor, that stated that no oral agreement would be honored and only extras directed in writing and agreed to before construction would be recognized for additional compensation.

Numerous defects in material and other items affecting the work of Berg were brought to the attention of Kucharo who repeatedly instructed Berg to get it done and that he would be paid. However, Kucharo later refused to pay, citing the requirement for written directives. Quoting from 9 Am. Jur. 17, the court stated:

> The courts have adopted various theories of avoidance which may be classed as those of independent contract, modification or rescission, waiver, and estoppel...Among the acts or conduct amounting to

> waiver are the owner's knowledge of, agreement to, or acquiescence in such extra work, a course of dealing which repeatedly disregards such stipulation, and a promise to pay for extra work orally requested by the owner and performed in reliance thereon.[7]

The court concluded that the written contract was properly modified by an oral agreement, and the essential elements of a binding contract existed. Kucharo's offer to pay could not be rescinded once Berg accepted that offer by performing the work.

Another case involving a promise to pay was heard by the Supreme Court of Oklahoma. The case involved the construction of a residence. The homeowner orally requested changes to the contract, and the changes were performed by the contractor. At the time, the owner acknowledged that there were additional cost involved. The contractor finished the house, and the work was accepted by the owner. However, the owner refused to pay for the extra work contending that directives were not in writing. The court determined that an oral contract had been made because the promise to pay was an acceptance on the contractor's offer to perform the work for additional considerations.[8]

Ordered by Authorized Agent

If the contractor receives an oral directive to perform changes to the work, it needs to be issued by a person having the proper authority to do so. In a complicated

case, Flour Mills of America, Inc. v. American Steel Building Co., the Supreme Court of Oklahoma considered claims and counterclaims of the three parties involved. The contract was for the construction of a building addition to the grain storage facilities in Alva, Oklahoma owned by Flour Mills. Problems arose during construction including moisture damage to grain that was already stored. Additional work was also directed. The contractor claimed compensation for extras orally directed by the owner. The court specifically determined that those who ordered the extra work had been authorized to do so by Flour Mills. The court also stated:

> The same principle...is recognized by this court in Jackson Materials Co. v. Grand River Dam Authority, supra, at page 560 of the Pacific report of the opinion, but was not applied therein because the person who made the subsequent oral agreements involved therein had not been authorized to do so and his action in doing so had not been ratified by the only entity authorized by statue to make such agreements.[9]

Authority can be either actual or apparent. However, the above case affirms the important condition that apparent authority cannot be extended to someone who does not posses authority unless there is some positive action (or inaction) by the person who actually possesses the authority.[10] A case heard before the Circuit Court of Appeals, Fourth Circuit, further illustrates apparent authority. The contract called for hauling a steamer ferry out of the water for overhaul. The overhaul included significant timber replacement, remetaling, recaulking and plumbing and

straightening. The contract contained a provision stating that no extra work of any kind would be considered unless it was submitted beforehand and was approved and signed by the chairman of the board of the ferry company. When the work began, the condition of the ferry was found to be much worse than anticipated. At a conference with the contractor, the master of the steamer (Capt. Cherry), the president of the ferry company, and the inspector, additional repairs were agreed upon orally. These were subsequently performed by the contractor.

The court found that there was confusion concerning what was said and what was intended by the various parties at the conference. However, at the conclusion of the conference, the plaintiff was told to "go ahead." The court stated:

> Work was immediately begun on the hull, under the direction of Capt. Cherry as superintendent, who stayed at the work, and directed personally what rotten wood and timbers should be taken out and what work should be done, and how it should be done, until the steamer was completed...[11]

The court also noted that the president and various officers of the ferry company were frequently at the steamer and allowed the work to be done. Although not provided for by the contract, Capt. Cherry possessed apparent authority to direct the extra work, and the officers of the company made no attempts to limit his directing the work. This inaction by the ferry company was sufficient to lead the

contractor to believe that the ferry captain had the authority to direct the changes.

Considerations

Valid contracts require considerations or an exchange of something of value. This criterion can include a determination of whether the oral directive was a unilateral promise or a bilateral agreement. However, courts may not be consistent regarding this issue. Sweet designates this requirement for consideration as the preexisting duty rule. As expressed in Chapter 4, Sweet believes parties should not be restricted from making agreements lacking considerations if the agreements are made voluntarily. Consider the following case.

The Supreme Court of California heard a dispute between an a owner constructing a building and the contractor who was hired to perform the concrete work for the foundation walls and retaining walls. The initial written agreement specified a unit price based on actual measurements of formwork. Prior to construction, the parties met and orally agreed to modify the method of measurement to include all concrete actually placed whether within or outside the forms and to the adjust this quantity by an appropriate factor to account for waste and shrinkage. For payment purposes, the contractor provided daily concrete delivery tickets to the owner. Later, the owner refused to pay in accordance with

the modified terms alleging the agreement was invalid. He stated the change was not in writing as required and the change resulted in additional compensation for the contractor but lacked consideration to the owner.

The majority opinion agreed with the contractor and awarded recovery. However, there were strongly dissenting opinions that argued that the potential for fraud was increased if the court allowed a claim where there was no consideration. The minority opinion is clearly consistent with the well established principles of contract formation.

Waiver of Written Requirement

Waiver is created by words, actions or inactions of the owner which result in the disregard of a contract requirement. If the contractor relies on the owner's conduct and acts in a way which is to his detriment, the owner will then be estopped from using the requirement against the contractor. The following case provides an excellent example of the waiver of the written changes requirement.

The case of Reif v. Smith, heard before the Supreme Court of South Dakota, involved construction work on a log home. Partly due to inadequacy of the plans, there were numerous changes during the construction. Section 15 of the contract documents specified that all changes must be

ordered in writing and any change in contract price must be settled prior to commencement of the work. Relative to Section 15, the court stated:

> Generally, provisions like Section 15 prevent contractors from recovering for alterations or extras not subject to a written order...Such provision, however, are impliedly waived by the owner where he has knowledge of the change, fails to object to the change, and where other circumstances exist which negate the provision; i.e., the builder expects additional payment, the alteration was an unforeseen necessity or obvious, subsequent oral agreement, or it was ordered or authorized by the owner...Additionally, repeated or entire disregard for contract provisions will operate as a waiver of Section 15.[12]

The trial court record indicated that the Smiths (owner) were on the job site repeatedly, had knowledge of certain changes and authorized others, and made several progress payments after the changes were made. The court found the Smiths' actions inconsistent and said that:

> Owner who drew construction contract with written change order requirement could not come into court and acknowledge having authorized some changes without single written change order and admit liability for such items but deny waiver as to other changes as to which he had knowledge but made no objection.[13]

The Smith's conduct was apparently consistent and resulted in several oral changes. Since the conditions of change order creation were identical, the Smith's could not acknowledge some and disavow others. The court determined that the Smiths by their conduct had waived the requirement for written change orders and allowed Reif (contractor) to recover.

CHAPTER 6

VALIDATION OF RULES OF APPLICATION

Purpose of Verification

The rules developed in the preceding chapters were distilled from many decades of United States Federal and State Appellate Court case law and Board of Contract Appeal decisions. Though the rules were developed from criteria appearing in all three legal jurisdictions, no apparent difference were evident between the courts. Cases involving only notice as the primary dispute are infrequent. To obtain an adequate sampling, some older cases were reviewed; the oldest case included in this research involved repair work made necessary by the Civil War. This body of case law is continually responding to changes in legislative law and judicial attitudes. The reference cases used in developing the rules (see Tables 5 and 10) were evaluated to determine their subsequent treatment by later decisions. Also, the rules themselves were evaluated against the most recent court decisions involving disputes over notice and oral change order requirements to determine if they satisfactorily represent the criteria currently used by the courts. This verification process is described below.

Verification Process

Verification was a three step process. First the reference cases used in developing the rules were "Shepardized" to evaluate how the decisions were subsequently treated in other disputes. From this research, no modifications of the decisions were made on the issues of notice or oral changes.

Secondly, the research, rules and flowchart logic were evaluated by Mr. C. Grainger Bowman, an attorney for the law firm of McNees, Wallace and Nurick, Harrisburg PA. He is a member of the American Bar Association and the Pennsylvania Bar Association in which he serves as chairman of the public contract law committee. Specializing in construction contract disputes and public contract law, his critical review provides needed evaluation by someone trained specifically in contract law matters. His response was enthusiastic and his few supplemental comments have been incorporated into the paper.

Lastly, the most recent two years of case law were researched in the West regional and federal reporter systems using the West Key Numbers applicable to notice and oral changes. A total of eleven cases were reviewed. The process consisted of: 1) identifying the criteria used to decide each dispute, 2) determining the precedence of consideration (if any), and 3) comparing the court decision

to that obtained by following the rules summarized in Figures 2 and 4.

Table 11 summarizes the criteria used in each of the eleven cases. The fact that a court decision did not consider all the criteria is not surprising. The major cases researched to formulate the rules rarely fully explained the case law leading to the decisions. Table 11 shows that no additional criteria were applied. There was nothing substantial to suggest that the sequence or hierarchy of criteria should be altered. Finally, by applying the rules in the hierarchy presented in Figures 2 and 4, conclusions were reached matching those of the courts. This additionally documents the consistency of the appellate court case law. However, some minor points merit further discussion.

Points of Discussion

Additional Considerations?

The cases reviewed revealed no additional criteria are necessary to evaluate notice or oral change order disputes. However, additional contractual issues may result in a decision of no entitlement even if all the criteria have been met.

A case in point is Felix J. Ambrose v. Aubrey F. Biggs,

TABLE 11

Rule Verification Matrix

LIST OF CASES	650 F.SUPP. 1	521 N.E.2d	509 N.E.2d	53 A.2d	499 S.2d 1	52 S.2d	52 S.2d	364 S.E.2d	37 S.E.2d	711 S.W.2d	715 S.W.2d
ORAL CHANGE ORDER	1	5	6	5	3	5	4	5	9	4	2
NOTICE	3	0	1	2	5	8	2	7	7	6	9
	8	6	4	3	4	2	2	8	5	2	5
WRITTEN CHANGE ORDER REQUIREMENT APPLICABLE	X								X		X
PROHIBITED BY STATUTE					X						
REQUESTED BY OWNER		X	X	X	X	X	X	X	X		
ORDERED BY PROPER AUTHORITY		X	X	X	X	X	X	X	X		
PROMISE TO PAY ADDITIONAL COMPENSATION		X	X	X		X	X	X	X		
WRITTEN CHANGE ORDER PROVISION WAIVED		X	X	X	X		X		X	X	
BREACH OF CONTRACT											
OWNER KNOWLEDGE		X	X			X	X				X
ADDITIONAL COMPENSATION EXPECTED FROM CONTRACT		X	X			X	X				X
TIMING OF NOTICE						X	X			X	X
WOULD OWNER HAVE ACTED DIFFERENTLY											
NOTICE PROVISION WAIVED										X	

509 N.E.2d 614. The case involved construction of a house on property owned by the Biggses.

The contract included the following pertinent provisions:

> (1) payment of the contract price was to be made in three installments-the first payout when construction was under roof, the second payout when the trades were roughed in and the third and final payout upon substantial completion of the building; (2) Ambrose would comply with the Mechanics' Liens Act of Illinois (Ill.Rev.Stat.1983,ch.82,par.1 et seq.);...(4) any extras must be evidenced in writing, and any adjustment to the contract price resulting from extras shall be determined by mutual agreement of the parties before starting the work involved.[1]

The purpose of the Mechanics' Liens Act is to protect the owner from potential, valid subcontractor claims. This protection is provided by a sworn contractor's statement which lists names and addresses of the parties furnishing materials and labor and the amount due prior to the owner making payment to the contractor.

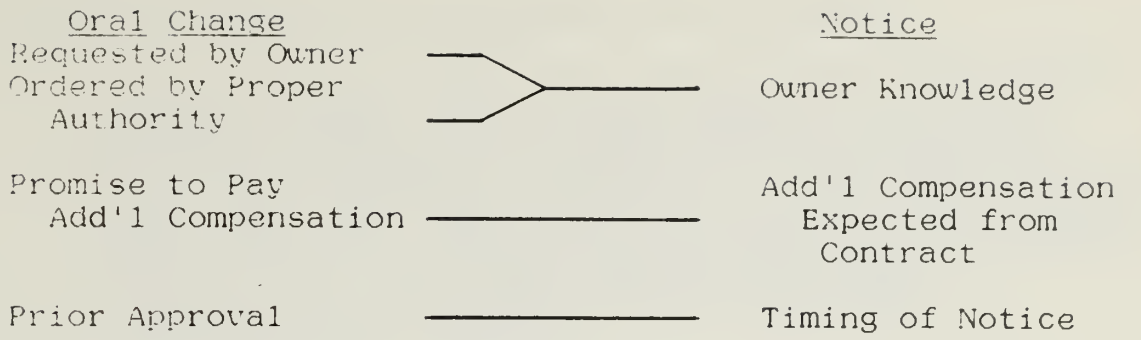
Construction began and the owner paid the first two payments even though the contractor failed to comply with the Mechanics' Liens Act requirement that a sworn contractor's statement be provided prior to payment. In evaluating, the court found that the Biggses were on site nearly every day and that all the criteria for oral modification of a written contract as described in the Watson Lumber Co. v. Guennewig (1967), 226 N.E.2d 270, were satisfied. However, the trial court determined that the contractor could not recover for the extras because he

failed to provide a contractor's statement in accordance with the Mechanics' Liens Act as required by another contract provision. The court also ruled against the owner on their countersuit for delay damages. The owners appealed.

The appellate court affirmed the trial court decision stating that failure to comply with the referenced state statute barred the contractor from recovery for the extras. The the contractor had satisfied all the criteria to establish the existence of an oral change to the written contract but was precluded from recovery for failing to satisfy another contract requirement. The court specifically noted that the owner's first two payments did not act as a waiver of the requirement since the contract is subordinate to the law.

Similarity Between Notice and Oral Change Order Disputes

The matrix in Table 11 shows that disputes involving oral changes and notice often involve the same criteria. This is understandable since one of the situations requiring notice is that of extra work. In an extra work dispute, the rule base (flowcharts) for oral change orders and notice appear to merge. The considerations of owner direction and owner prejudice mirror one other as follows:



While both situations are simultaneously studied, the decision is referenced only to the oral change order dispute for extra work. This implies that the oral change order criteria have priority in disputes for extra work. Logically if the owner orders and agrees to pay for extra work, owner notice is implicit.

Clear and Convincing Evidence

Cases reviewed involving waiver of contract provisions indicated that the party attempting to invoke the doctrine of waiver had the burden of proof. One court in discussing this burden of proof stated that evidence establishing waiver beyond a reasonable doubt was not required but merely a preponderance, a superiority of influence, of evidence to support the assertion.

However, the Ohio Court of Appeals established a different measurement of proof in the case of Frantz v. Van Gunten. In that case the court quoted from the 18 Jurisprudence 3d (1980) 110, 111, Contracts, Section 205,

concerning orders for extras to be in writing:

> That such a provision in a contract may be waived is settled in Ohio...It is held, however, that such stipulation being for the benefit of the employer, proof of a waiver must either be in writing or by such clear and convincing evidence as to leave no reasonable doubt about it. There is no presumption as to such a waiver, and it has been stated that a mere preponderance of evidence is not sufficient to establish such a waiver.[2]

The court then quoted the case of Cross v. Ledford (1954), 161 Ohio St. 469, 53 O.O. 361, 120 N.E.2d 118 in defining what constituted clear and convincing evidence.

> Clear and convincing evidence is that measure or degree of proof which is more than a mere 'preponderance of the evidence,' but not to the extent of such certainty as is required 'beyond a reasonable doubt' in criminal cases, and which will produce in the mind of the trier of facts a firm belief or conviction as to the facts sought to be established.[3]

This is not an alteration to the criteria considered by the courts; however, it does reflect that attitudes differ among courts of various jurisdictions. The level of evidence necessary to establish waiver is not easily comprehended by the layman and is best left with a qualified attorney.

Summary

A review of eleven recent construction disputes involving oral changes orders or notice confirmed that the criteria presented in the previous chapters adequately defines construction case law. These rules may not work in

all situations, as contradictory decisions can undoubtedly be found. However, these rules should be correct in the majority of the situations encountered.

CHAPTER 7

CONCLUSIONS

Parties are generally allowed to autonomously form contracts based upon mutually agreeable terms. The courts strictly enforce those terms unless they violate established principles of statutory law. The courts treat contract notice and change order technical requirements subordinate to the law. The courts often state that absent waiver, the contract requirements will be strictly enforced. This is a very broad definition of waiver. A much narrower definition is used in this paper, only including instances where the acts or conduct of the parties have resulted in waiver.

The more than seventy cases reviewed represented a sampling from most jurisdictions. The breakdown is as follows:

Jurisdiction	Type of Owner
Federal - 25	Federal - 15
State - 45	State - 4
Board of Contract Appeals - 4	Local - 8
	Private - 47

Substantial consistency exists in case law involving oral change orders and notice disputes.

Application of This Research

Oral Change Orders

In contract disputes involving oral change orders, compliance with either of two criteria prevents enforcement of the written change order requirement. The first relates to contract formation principles. The second concerns conduct of the parties and the question of waiver. Of these two criteria, it is not readily apparent which the courts considers first. This paper presents the contract formation principles as having precedence. A party establishes a firmer dispute foundation by demonstrating adherence to contract formation principles rather than first seeking to find ways to escape conformance with the formal contract requirements.

When confronted with a situation of oral change order, the initial determination is to ascertain if the operative clauses require a written directive. In most instances, a written directive will be required; however, where standard contract forms are not used, it is possible that a contract "loophole" may exist so as to negate the requirement. Assuming a written directive is required, a review of regulations and statutes should follow. Where regulations require written directives, signed by specific persons, or

presented in a specific manner, contractors will not be compensated unless there is full compliance.

The next criterion is to determine if the essential elements of a contract are present. An offer and acceptance and consideration are the two most important elements relative to oral changes. The owner must know of the problem and must know that the contractor expects compensation. Oral directives are valid expressions of an offer and acceptance. However, the owner must know that he is requesting work that will require additional compensation. An implied or express promise to pay cannot be rescinded later.

Authority rests with specific individuals. However, apparent authority can be extended to others. Importantly, this cannot be done without some expression of intent by the person possessing the authority. Expressions can be actual or implied. Knowledge that unauthorized changes are being made accompanied by no effort to stop the unauthorized activities is paramount to conveying apparent authority.

If the elements of contract formation are not followed, the only recourse available to a contractor is to show that the requirement has been waived. An example of waiver is an owner paying for other unauthorized changes.

Notice

When confronted with a situation of notice, the initial determination is which of the notice provision governs and what technical requirements apply. Often one situation can embrace more than one provision. Caution advises referencing all that might be eventually be applicable but ensuring the most stringent technical requirement is satisfied. When standard contract forms are not used, avenues of recovery can often be found in spite of noncompliance but these are less frequent as standard contract forms become more widely used.

Assuming written notice is required, review of governing statutes and regulations should follow. Noncompliance with statutory requirements precludes recovery. Actions of the parties, contract requirements are both subordinate to the law.

The next consideration should be whether the intent of the requirement has been satisfied. The owner must have actual, implied or imputed knowledge of the situation. In addition, he must be aware that the contractor expects additional compensation. Finally, the owner must be informed in time to prevent prejudice of his contractual rights. If these criteria have been met, the intent of the notice requirement has been satisfied.

If the intent has not been satisfied, the only

available option of recovery is that of waiver. An example is where the owner by his repeated words or conduct has conveyed to the contractor that the notice requirements will not be enforced.

Two locations in Figure 2 titled "Attitude of the Court" indicate that some courts have recognized other considerations. These have not been consistently applied by the courts and should be used with caution.

In situations where both notice and written change orders are required, the primary considerations are the contract formation principles. If the owner orders and agrees to pay for extra work, owner notice is implicitly satisfied.

Additional cases reviewed since completion of the research include Moorhead Construction Co. v. City of Grand Forks (508 F.2d 1008), T. Lippia and Son, Inc. v. Jorson (342 A.2d 910), and Watson Lumber Company v. Lloyd Mouser (333 N.E.2d 19). These decisions further confirm the rules and flowcharts developed.

Relevancy of This Research

The need for this research is evidenced by the treatment of the case of State of Indiana v. Omega Painting, Inc. (463 N.E.2d 287) by Michael C. Loulakis in the Legal Trends column "Contract Notice Requirements" of the January

1985 edition of Civil Engineering. The column indicates that the decision evidences a return to strict application of the contract notice requirements, the Plumley doctrine.

The case involved the sandblasting and painting of a bridge structure. Problems arose when the state changed inspectors. The new inspector required more blasting than the contractor felt necessary to attain the specified finish. The contract contained the provision: "If the Contractor deems that additional compensation will be due him for work or material not clearly covered in the contract or not ordered as extra work, he shall notify the Engineer in writing..."

Neither the owner nor the contractor asserted the change was classified as extra work, but the contractor stated that the owner somehow modified the contract. The contractor also failed to introduce evidence to show owner waiver of the provision.

The case is complex and confusing, contained limited information and the issues of oral change order and notice were inseparably intertwined. The conclusion drawn by Mr. Loulakis is misleading.

Such a case cannot be used solely as a basis to evidence return to the Plumley doctrine. A sampling of significant cases must be made and the body of case law evaluated to make such conclusions. By grasping a single case, authors can portray the courts as capricious and

incongruous in their decisions while missing the remarkable overall consistency.

Areas for Additional Research

Some areas of apparent difference do deserve further research. These are briefly discussed below.

Effect of Breach

Two cases dealt with the issue of breach but reached different conclusions about the enforceability of notice requirements. While one court stated that breach by the owner released the contractor from that requirement, another court stated that satisfaction of the technical requirements by the contractor was prerequisite to his maintenance of the breach action. How does the court view the effect of breach?

Prior Consideration of Claim

Two cases dealt with the issue of prior consideration of a dispute by the owner on the its merits. One court indicated that prior consideration by the owner prevented invoking the technical requirements of the notice provision as a bar to recovery. Another court stated that once either

party appeals, the prior decision by the owner is voided and has no effect on the decision. That court further stated that prior consideration should not bar enforcement of contract notice requirement as a defense. How does the court view the effect of prior consideration of a claim on its merits?

Level of Evidence to Establish Waiver

The level of evidence required to establish waiver was different between two cases. Where one court only required a preponderance of evidence, another court required clear and convincing evidence. This question is more subjective in nature and may be more difficult to determine.

Constructive Change or Waiver

The courts appeared to use the terms waiver and constructive change interchangeably. Further definition and research is needed to determine if they are the same.

FOOTNOTES

CHAPTER 1

1. Justin Sweet, Legal Aspects of Architecture Engineering and the Construction Process, p. 51.

CHAPTER 2

1. Watson Lumber Company v. Guennewig, 226 N.E.2d 270, 276 (1967).

2. Blankenship Construction Company v. North Carolina State Highway Commission, 222 S.E.2d 452, 462 (1976).

3. Paul A. Logan, Claim Avoidance and Settlement in Construction Contracts with the Federal Aviation Administration, p. 35.

4. Sante Fe, Inc., VABCA Nos. 1898 and 2167.

5. Irv Richter and Roy S. Mitchell, Handbook of Construction Law & Claims, p. 165.

6. James O'Brien, Construction Delay, p. 119.

7. A. G. Guest, Anson's Law of Contract, pp. 436, 437.

8. Plumley v. United States, 226 U.S. 545, 33 S.Ct. 139, 57 L.Ed. 342 (1913).

9. Paul A. Logan, op. cit., p. 35.

10. Transportation Research Board, Research Results Digest, p. 7.

11. Schnip Building Company v. United States, 645 F.2d 950 (Ct.Cl. 1981).

12. Weeshoff Construction Co. v. Los Angeles County Flood Control District, 88 Cal.App.3d 579 (1979).

13. Chaney & James Construction Co. v. United States, 421 F.2d 728 (Ct.Cl. 1970).

14. Sante Fe, Inc., VABCA Nos. 1898 and 2167.

15. Hoel-Steffen Construction Company v. United States, 456 F.2d 760.

16. Buchman Plumbing Company, Inc. v. Regents of The University of Minnesota, 215 N.W.2d 479 (1974).

17. Hoel-Steffen Construction Company v. United States, 456 F.2d 760.

18. Vanderlinde Electric v. City of Rochester, 54 A.D.2d 155, 388 N.Y.S.2d 388 (1976).

19. Appeal of Lane-Verdugo, ASBCA No. 16327, 73-2 B.C.A. (CCH) para. 10,271 (1973).

20. Bruce M. Jervis and Paul Levin, Construction Law, Principles and Practice, p. 149.

21. Powers Regulator Company, GSBCA Nos. 4668, 4778, 4838, 71,302.

22. Appeal of C. H. Leavell & Co., ASBCA No. 16099,73-1 B.C.A. (CCH) para. 9781 (1973).

23. Gilbert J. Ginsburg and Brian A. Bannon, Calculating Loss of Efficiency Claims, p. 31.

24. Vanderlinde Electric v. City of Rochester, 54 A.D.2d 155, 388 N.Y.S.2d 388 (1976).

25. Appeal of Lane-Verdugo, ASBCA No. 16327, 73-2 B.C.A. (CCH) para. 10,271 (1973).

26. Blankenship Construction Company v. North Carolina State Highway Commission, 222 S.E.2d 452.

27. E. C. Ernst, Inc. v. General Motors Corporation, 482 F.2d 1047 (5th Cir. 1973).

CHAPTER 3

1. Nat Harrison Associates, Inc. v. Gulf States Utilities Company, 491 F.2d 578.

2. Nat Harrison Associates, Inc. v. Gulf States Utilities Company, 491 F.2d 578.

3. Buchman Plumbing Company, Inc. v. Regents of The University of Minnesota, 215 N.W.2d 479 (1974).

4. Plumley v. United States, 226 U.S. 545, 33 S.Ct. 139, 57 L.Ed. 342 (1913).

5. Hoel-Steffen Construction Company v. United States, 456 F.2d 760.

6. Powers Regulator Company, GSBCA Nos. 4668, 4778, 4838, 71,302.

7. Powers Regulator Company, GSBCA Nos. 4668, 4778, 4838, 71,302.

8. Watson Lumber Company v. Guennewig, 226 N.E.2d 270 (1967).

9. Watson Lumber Company v. Guennewig, 226 N.E.2d 270 (1967).

10. Watson Lumber Company v. Guennewig, 226 N.E.2d 270 (1967).

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13. Schnip Building Company v. United States, 645 F.2d 950 (Ct.Cl. 1981).

14. Powers Regulator Company, GSBCA Nos. 4668, 4778, 4838, 71,302.

15. Barry B. Bramble, Construction Delay Claims, p. 30.

16. Sante Fe, Inc., VABCA Nos. 1898 and 2167.

17. Justin Sweet, Legal Aspects of Architecture Engineering and the Construction Process, p. 552.

18. Crane Construction Co., Inc. v. Commonwealth, 195 N.E. 110.

19. Henry C. Black, Black's Law Dictionary, p. 1752.

20. R. D. Wood & Co. v. City of Fort Wayne, 119 U.S. 312, 321 (1886).

21. R. D. Wood & Co. v. City of Fort Wayne, 119 U.S. 312, 321 (1886).

CHAPTER 4

1. Justin Sweet, Legal Aspects of Architecture Engineering and the Construction Process, p. 534.

2. Transportation Research Board, Research Results Digest, p. 3.

3. Robert A. Rubin, Construction Claims Analysis, p. 28.

4. Michael S. Simon, Construction Contracts and Claims, p. 111.

5. McNeill Stokes and Judith L. Finuf, Construction Law for Owners and Builders, p. 109.

6. Michael S. Simon, Construction Contracts and Claims, p. 114.

7. Michael S. Simon, Construction Contracts and Claims, p. 114.

8. Michael S. Simon, Construction Law Claims and Liability, p. 11.6-1.

9. Nathan Walker and Theodor K. Rohdenburg, Legal Pitfalls in Architecture, Engineering, and Building Construction, p. 86.

10. Michael S. Simon, Construction Law Claims and Liability, p. 11.7-3.

11. Michael S. Simon, Construction Contracts and Claims, p. 117.

12. Justin Sweet, Sweet on Construction Industry Contracts, p. 235.

13. Justin Sweet, Legal Aspects of Architecture Engineering and the Construction Process, p. 502.

14. Berg v. Kucharo Construction Co., 21 N.W.2d 561, 567 (1946).

15. Teer v. George A. Fuller Co., 30 F.2d 30, 32 (1929).

16. Teer v. George A. Fuller Co., 30 F.2d 30, 32 (1929).

17. Teer v. George A. Fuller Co., 30 F.2d 30, 32 (1929).

CHAPTER 5

1. R. D. Wood & Co. v. City of Fort Wayne, 119 U.S. 312, 321 (1886).

2. United States v. Slater, 111 F.Supp. 418, 420 (1953).

3. Watson Lumber Company v. Guennewig, 226 N.E.2d 270 (1967).

4. Central Iowa Grading, Inc. v. UDE Corp., 392 N.W.2d 857, 858 (1986).

5. Central Iowa Grading, Inc. v. UDE Corp., 392 N.W.2d 857, 858 (1986).

6. Blair v. United States, 66 F.Supp. 405, 405 (1946).

7. Berg v. Kucharo Construction Co., 21 N.W.2d 561, 567 (1946).

8. Kenison v. Baldwin, 351 P.2d 307 (1960).

9. Flour Mills of America, Inc. v. American Steel Building Co., 449 P.2d 861, 878 (1969).

10. Justin Sweet, Legal Aspects of Architecture Engineering and the Construction Process, p. 45.

11. The Sappho, 94 Fed. 545, 549 (1899).

12. Reif v. Smith, 319 N.W.2d 815, 817 (1982).

13. Reif v. Smith, 319 N.W.2d 815, 815 (1982).

CHAPTER 6

1. Ambrose v. Biggs, 509 N.E.2d 614 (1987).

2. Frantz v. Van Gunten, 521 N.E.2d 506 (1987).

3. Frantz v. Van Gunten, 521 N.E.2d 506 (1987).

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